DOCUMENT RESUME

ED 099 525 CE 002 606

TITLE	Clothing Services: Coordinated Vocational Academic Education.
INSTITUTION	Texas Education Agency, Austin. Dept. of Occupational Education and Technology.; Texas Tech Univ., Lubbock. Home Economics Instructional Materials Center.
PUB DATE	74
NOTE	340p.; For other guides in the series, see CE 002 607-608
EDRS PRICE	MF-$0.75 HC-$16.20 PLUS POSTAGE
DESCRIPTORS	Career Education; *Clothing Instruction; Clothing Maintenance Specialists; *Curriculum Guides; *Disadvantaged Youth; Handicapped Students; Home Economics Education; Laboratory Procedures; Needle Trades; *Occupational Home Economics; Reference Materials; Secondary Education; *Service Occupations; Sewing Instruction; Vocational Education
IDENTIFIERS	Texas

ABSTRACT

Designed for junior or senior high school students with academic, socio-economic, or other handicaps, the Coordinated Vocational-Academic Education (CVAE) Clothing Services curriculum guide is also useful in other vocational education programs. Information is presented in three sections. Section one is an overview for teacher preparation; suggestions for planning, teaching, and evaluating CVAE programs; and suggestions for using the guide. Section two includes the following concepts: job opportunities in clothing services, sewing tools and equipment, sewing skills, custom clothing construction, assembly line production, alteration and repair, laundering and dry cleaning, and packing and storing clothes. Section three aids the teacher in planning laboratory experiences which simulate actual job situations. Patterns and directions are included for a number of projects adaptable to assembly line techniques. General suggestions for conducting laboratory experiences are also included. A 14-page annotated reference list concludes the document and offers student references, books, audiovisual aids, pamphlets and other instructional materials. (MW)

CLOTHING SERVICES

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COORDINATED VOCATIONAL ACADEMIC EDUCATION

CE002606

Homema lucation
Division ic School Occupational Programs
Departm ccupational Education and Technology
Texas Ed Agency
Austin, Texas

CLOTHING SERVICES

Materials Developed and Distributed by

Home Economics Instructional Materials Center
Texas Tech University
Box 4067
Lubbock, Texas 79409

Directed by

Texas Tech University
College of Home Economics
Department of
Home Economics Education
Lubbock, Texas

In Cooperation with

Texas Education Agency
Department of Occupational
Education and Technology
Homemaking Education
Austin, Texas

DESCRIPTION OF
HOME ECONOMICS INSTRUCTIONAL MATERIALS CENTER

The Home Economics Instructional Materials Center was established September 1, 1967, as a continuing project. It is a cooperative project between Homemaking Education in the Texas Education Agency, and the College of Home Economics, Home Economics Education Department, Texas Tech University at Lubbock, Texas. The instructional materials which are being developed at the Center are intended to assist teachers and coordinators in promoting and teaching home economics gainful employment programs or homemaking education.

To provide a background of information for the establishment of the Home Economics Instructional Materials Center, a Planning Grant Project was approved by the Texas Education Agency for February 1 through August 31, 1967. The major purposes of the Planning Grant Project were (1) to assemble and catalog an occupational reference library, (2) to develop procedural steps for preparation of instructional materials, and (3) to illustrate the first sequence of these steps, that is, to develop job analyses and to list competencies needed for employability of students.

The present major objectives of the Home Economics Instructional Materials Center are (1) to develop instructional materials designed for use by students enrolled in cooperative part-time training programs and in pre-employment laboratory training programs in preparation for employment in occupations requiring home economics knowledge and skills, (2) to develop materials in homemaking education, and (3) to develop at a later time materials designed for use in home and community service programs.

Acknowledgement is given to:

Mrs. Elizabeth F. Smith, Director, Homemaking Education, Texas Education Agency, who conceived the original plan for establishing the Center and continues to determine ways in which the Center can meet the needs of Homemaking Education in Texas.

Dr. Camille G. Bell, Chairman, Department of Home Economics Education, who continues to serve in an advisory capacity.

Linda Glosson, Acting Director
Home Economics Instructional
Materials Center

Betty Robinson, Assistant Director
Home Economics Instructional
Materials Center

ACKNOWLEDGMENTS

This guide for CVAE Clothing Services, prepared by the Home Economics Instructional Materials Center at Texas Tech University, is the result of the combined efforts and ideas of many people, namely:

Mrs. Ruth Gill, San Antonio, Texas; Mrs. Frances Whitaker, Ft. Worth, Texas; and Mrs. Genice Whisenhunt, Dangerfield, Texas, CVAE Teachers who spent a month at the Center helping with the writing of these materials.

Mrs. Myra Timmons, Department of Clothing and Textiles, Texas Tech University, who served a subject-matter specialist in clothing services.

Mrs. Virginia Thompson, Lubbock, Texas, who drew the illustrations for the instructional materials and designed the cover.

Mrs. Luella Anderson, Miss Gay Nell McGinnis, Mrs. Peggy Simmons, Mrs. Sharla Becton, Mrs. Linda Ferguson, and Miss Vicki Reid, Graduate Research Assistants, Texas Tech University, Lubbock, Texas who helped with the development of this guide.

Mr. John Troeger, Manager, Levi Strauss and Company, Lubbock, Texas, Mr. J. D. Harris, Dotti Dan Inc., Lamesa, Texas, and Mr. Elmer D. Harris, Harris Sewing Machine Company, Lubbock, Texas, who supplied technical information.

PREFACE

"Coordinated Vocational-Academic Education is designed for students with special learning needs. The program is for in-school youth possessing acedemic, socio-economic, or other handicaps which prevent them from succeeding in traditional educational endeavors. The program includes vocational instruction that provides opportunities of achieving a saleable vocational skill and modified academic instruction that provides basic knowledge in the fields of mathematics, science, English, and social studies. The dual-phase approach enables students enrolled to reach maximum personal development, including employment potential, within their abilities in the shortest possible time. The program must be supported by a specialized guidance and counseling program."

"Coordinated vocational-academic education is designed for the following purposes:

> To provide students with education preparing them for gainful employment in jobs requiring semi-skilled knowledge and training.
> To prepare students, when feasible, for entry into a regular high school vocational program preparing for gainful employment.
> To provide students with an academic curriculum, that departs from traditional content and methods of teaching, at a level where students can succeed."[1]

CVAE Clothing Services is designed for use in teaching the clothing phase of General Home and Community Services at the junior or senior high school level or in teaching Commercial Clothing at the high school level. Although the materials were designed specifically for CVAE Programs, they should be equally useful to teachers of Pre-employment Laboratory Training Programs, Vocational Education for the Handicapped, Home Economics Cooperative Education, and adult vocational education programs.

The following concepts are included: job opportunities in clothing services, sewing tools and equipment, sewing skills, custom clothing construction, assembly line production, alteration and repair, laundering and dry cleaning, and packing and storing clothes.

The information included in this publication is presented in three sections. Section One includes an overview forpreparing teachers to teach CVAE students; suggestions for planning teaching, and evaluating CVAE programs; and suggestions for using this guide.

Section Two includes the following concepts and subconcepts in clothing services:

> Orientation to CVAE Clothing Services introduces the student to CVAE Clothing Services through displays and shows relationships between job opportunities in clothing services and students' ability to perform necessary tasks in those jobs.

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[1] Vocational Homemaking Education Program Standards. Revised May 1973. Austin, Texas: Texas Education Agency, 1973. p. 29.

Ability to safely use and care for sewing tools and equipment contributes to the student's employability. Emphasis is placed on learning correct names of tools and equipment and of parts essential in operation of them. The student learns when to use each tool or piece of equipment, how to use it safely and correctly, how to care for it, and where to store it.

Basic sewing skills are essential in several jobs in clothing services (alterations, dressmaking, and industrial sewing). Acquiring these basic skills should encourage the student to seek employment in jobs requiring sewing. Basic hand stitches used in clothing construction, domestic machine stitching, commercial machine stitching, and designer techniques are included. Emphasis is placed on learning correct techniques, on correct posture, and on learning to set up and maintain equipment in simulated job situations. Commonly used finishing techniques including use of machine attachments, buttonholing, decorative machine stitches, and decorative hand stitches are also included.

Custom clothing construction requires knowledge of basic information about textiles, line and color, techniques of body measurements, and commercial patterns. Management in construction, fabric preparation, pattern use, pressing, basic construction techniques, and fitting are included as important concepts in garment construction. Customer relationships are especially emphasized.

Procedures in assembly line production are learned through field trips, visuals, and practical experience. Projects are suggested which may be produced using assembly line techniques. Special emphasis is given to time-saving techniques which may help increase production and thus to pay earned by the employee.

Ability to make alterations and repairs on men's and women's clothing contributes to employability in laundries, dry cleaners, alteration shops, and clothing departments and stores. This section includes information on general techniques involved and on procedures for making garment repairs and for altering men's and women's clothing.

Both domestic and commercial laundry and dry cleaning procedures are covered. Topics covered include receiving, sorting, and marking; laundry procedures; dry-cleaning procedures; and inspection, assembling, and bagging.

Housekeepers and employees in dry cleaning establishments may be responsible for packing and storing clothes. Information is given on supplies for storing apparel, procedures for seasonal storage of garments, and on packing garments for travel.

Section Three should aid the teacher in planning laboratory experiences which simulate actual job situations. Patterns and directions are included for a number of projects adaptable to assembly line techniques. General suggestions for conducting laboratory experiences are also included.

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SECTION ONE

OVERVIEW

DESCRIPTION OF THE CVAE STUDENT

The Vocational Homemaking Education Program Standards (Revised, May, 1973) describe the student eligible for entrance into the CVAE program as a student who is enrolled in grades seven through twelve and who meets the following requirements:

1. The results of counseling indicate the student can profit from participation in the program.

2. A student must be one or more years behind grade level academically.

3. A student must be at least fourteen (14) years of age at the time of entry into the program.

CHARACTERISTICS OF THE CVAE STUDENT

The same general principles of learning which apply to other groups apply to CVAE students as well. The biggest difference lies in the meanings things hold for these learners and the degree to which certain factors are operative. For example, although all learners proceed from concrete to abstract, what is abstract and what is concrete may be different to CVAE students with congnitive and verbal problems and whose experiences may be limited in some areas. In addition, what motivates learning may be somewhat different for the CVAE student.

The CVAE student may be handicapped academically because of a lack of communication skills and low reading ability. These problems, as well as lack of cultural or educational advantages, may have contributed to his failure to achieve at optimum levels in the regular academic program.

The CVAE program affords excellent opportunities for the teacher to provide experiences which encourage learning. A variety of activities may be used which enable the student to learn by doing. These techniques, more than lecture and research methods are more likely to be effective with the CVAE student. Because the CVAE student frequently has a short attention span and needs variety to maintain his interest.

Because of limited reading ability and communication skills, the CVAE student learns most effectively through experiences which de-emphasize reading or which include use of materials with low reading level. The student's low reading ability may restrict his comprehension of written materials. If so, explanations or demonstrations using actual equipment or objects may aid the student in learning a new concept. Audio-visuals may also enable the student to learn a concept he could not grasp from reading material alone.

The teacher must capitalize on opportunities to encourage a positive self concept in the CVAE student, as past failures may have given him a negative view of himself and his abilities. Providing experiences at a level which allows the student to succeed can do much to improve his self concept. At first it may be necessary to encourage even small successes until a pattern of success is established. The level of difficulty should then be increased gradually as the student is capable of attempting more difficult tasks. Of course, the student will not succeed at every task, but such experiences should be approached in a positive manner emphasizing the learning opportunity rather than the failure.

Motivation is another necessary element in encouraging the CVAE student to learn. Encouragement from the teacher plays a major role in motivation. Peer approval may also be important to the student and can be used as a motivating element. Rewards and privileges may be included in the program as motivating forces.

Improvements in personal appearance may enhance the student's self-concept. The CVAE classroom may provide opportunities for the student to develop good grooming habits, a pleasing personality, and a positive attitude by relating these characteristics to the world of work. In fact, relating classroom experiences to the student's present and future life outside the classroom may be an important key to unlocking the student's potential.

CVAE CLOTHING SERVICES GUIDE

CVAE Clothing Services is one of three guides being developed for use in CVAE programs in Texas. Additional guides are being prepared in the areas of Food Services and Home Furnishings Services.

Program Planning

Effective program planning for CVAE in the local community involves (1) understanding vocational skills needed for employment, (2) understanding human growth and development, and (3) cooperative planning.

Understanding Vocational Skills Needed for Employment. Planning and carrying out an effective CVAE program requires that the teacher understand the labor market in which her students will find employment. A study of job trends, job descriptions, pay scales, and opportunities for advancement should contribute to this understanding. Such a study involves determining home economics-related jobs available in the local community and in nearby communities, and getting acquainted with employers and employees in these jobs. It also involves constant study to learn procedures acceptable in various job situations, skills and attitudes needed for employment, and changes taking place in the field.

Understanding Human Growth and Development. The development of the individual from birth throughout life is characterized by the occurrence of certain tasks at each stage, and an awareness of the characteristics of youth related to them is an important part of program planning in the CVAE program.

Knowledge of the developmental tasks has several implications for the teacher. The tasks indicate the types of problems for which students must seek answers. The teacher must realize that individuals of the same chronological age are not necessarily in the same stage of development. In addition, the CVAE student may have special problems which must be taken into consideration. Because tasks arise at or about the same time in the student's life, however, she should be able to anticipate the teachable moment and to provide learning experiences which will meet the needs, interests, and abilities of the students.

Cooperative Planning. Planning the CVAE program cooperatively with students, parents, administrators, employers, and others in the community should result in more effective learning and a better curriculum than would be possible in a program designed by the teacher alone. Students, parents, employers, and other community members may be included in planning through questionnaires, planning groups, interviews, and advisory committees. Cooperative planning between CVAE vocational teachers and CVAE academic teachers is necessary for a successful CVAE program. Professionally trained persons including the school principal, other homemaking teachers, teachers in other subject areas, guidance personnel, and local and area supervisors also provide essential contributions to program planning. When preliminary plans have been developed, the teacher will want to discuss program planning with her students to acquire greater insight into their special needs and interests.

Curriculum Planning

Concepts and Generalizations. Curriculum planning for the CVAE program involves using knowledge of vocational skills needed for employment, understanding of human growth and development, and incorporating the results of cooperative planning to identify concepts and generalizations which provide opportunities for relevant and lasting learning contributing to employability. A concept may be defined as "an abstraction representing the world of objects and events as a means of organizing them into categories."[1] Meaning is given to concepts by generalizing from experiences that occur over a period of time. A generalization is a complete thought which "expresses an underlying truth, has an element of universality, and usually indicates relationships."[2] Generalizations help give meaning to concepts and should be applicable in a number of situations. A number of generalizations are needed to develop a single concept. To help students formulate generalizations, the teacher should provide learning experiences which require students to define, describe, analyze, identify, classify, relate, explain, justify, interpret, and predict.

Behavioral Objectives. Concepts and generalizations are used to plan appropriate behavioral objectives and learning experiences in order to develop reliable and expanded concepts. A behavioral objective is measurable behavior that is expected to result from successful completion of designated learning experiences. In order to educate the total student, objectives should be provided at all levels of the cognitive, affective, and psychomotor domains of the taxonomy of educational objectives.

Learning Experiences. Learning experiences should be selected to enable students to achieve each behavioral objective. Learning experiences in CVAE homemaking may be provided through the classroom, home, community, and Future Homemakers of America. Students' interests are more easily sustained if a variety of experiences are provided for learning by seeing, hearing, feeling, and doing.

Evaluation. Evaluation determines the extent to which a group or class has achieved behavioral objectives and indicates the effectiveness of the teacher and the curriculum. Effective evaluation is a continuous process which involves determining behavioral objectives, collecting evidence on behavior changes, interpreting the evidence collected, and using the evidence to improve the curriculum, teaching, and guidance. Methods of evaluation include pencil-and-paper tests, oral tests, performance tests, check sheets and inventories, score cards, rating scales, behavior records, and observations.

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[1] Concepts and Generalizations: Their Place in High School Home Economics Curriculum Development. Washington, D.C.: American Home economics Association, 1967.

[2] Ibid.

Contents of the Guide

In this guide the following format is used for each major concept:

Concept: Several major concepts related to clothing services are developed in this guide. No attempt has been made to determine the order in which the concepts and subconcepts should be taught. It is felt that this order will vary considerably from one CVAE class to another depending on such things as students' abilities and interests, time the class meets, projects chosen, equipment available, and the teacher's own experiences, interests, and abilities.

Justification for Study: Each major concept is introduced with a justification to help students understand the relevance of the material.

Subconcept: Several subconcepts are needed to develop each major concept. Generalizations, words to know, behavioral objectives, and learning and evaluation experiences are used to develop each subconcept. The subconcepts are developed as follows:

Generalizations: Meaning is given to each subconcept by summarizing or relating ideas presented.

Words to Know: Including the key words in each concept aids the teacher in building the student's vocabulary related to clothing services. Knowing these words is essential to learning the material presented.

Behavioral Objectives: Outcomes which should result from successful completion of the learning and evaluation experiences are given as behavioral objectives. The letters in parentheses at the end of the objective indicate the domain and level at which the objective is stated as follows: Cognitive Domain--Knowledge (C-K), Comprehension (C-C), Application (C-Ap), Analysis (C-An), Synthesis (C-S), Evaluation (C-E); Psychomotor Domain--Perception (P-P), Set (P-S), Guided Response (P-GR), Mechanism (P-M), Complex Overt Response (P-COR); Affective Domain--Receiving (A-Rec), Responding (A-Res), Valuing (A-V), Organization (A-O), Characterization (A-C). When objectives in more than one domain might be written for a learning experience, only the domain most closely related is used. Because such overlapping is particularly true at the lower levels of the three domains, only objectives in the cognitive domain are included at these levels. When objectives at more than one level might be written for a learning experience, only the higher level objective is given.

Learning and Evaluation Experiences: Suggestions are provided through the learning and evaluation experiences for ways each concept might be taught using a variety of teaching methods and techniques. Many of the suggested experiences may be used to evaluate the student's progress toward the objectives.

How to Use the Guide

The guide is presented by concepts, rather than units, to provide maximum freedom for the teacher to adapt the materials to her local situation. The material is not designed for use in any particular community. The teacher will need to use her own initiative, imagination, and creativity in working cooperatively with students, parents, employers, school, and community to develop an effective CVAE program.

The teacher is not expected to use all the suggested experiences given in this guide with one class. She may adapt, supplement, and expand the suggestions in view of the specific needs, interests, abilities, backgrounds, and levels of maturity of her students. The variety of experiences included should enable the teacher to select those teaching-learning experiences that will help her students reach objectives necessary for their employment.

The guide emphasizes ways various concepts might be taught rather than include all the information the teacher will need to know to carry out the suggested learning and evaluation experiences. The teacher will find a variety of references included in the reference list accompanying the guide which will aid in becoming knowledgeable in the various aspects of Clothing Services. In addition, the teacher should use Clothing Assistant[1] as a primary source of information on the concepts included in this guide.

REFERENCES TO BE USED IN PLANNING

Arny, Clara Brown. Evaluation in Home Economics. New York, New York: Appleton-Century-Crofts, Inc., 1953.
Bloom, B.S., ed. Taxonomy of Educational Objectives: Cognitive Domain. New York, New York: David Mckay Company, Inc., 1956.
Concepts and Generalizations: Their Place In High School Home Economics Curriculum Development. Washington, D.C.: American Home Economics Association, 1967.
Gronlund, Norman E. Stating Behavioral Objectives for Classroom Instruction. New York, New York: The Macmillan Company, 1970.
Krathwohl, D. R., et al. Taxonomy of Educational Objectives: Affective Domain. Palo Alto, California: Fearon Publishers, 1962.
Sanders, Norris M. Classroom Questions, What Kinds? New York, New York: Harper and Row, 1966.
Simpson, Elizabeth J. "Classification of Educational Objectives, Psychomotor Domain," Illinois Teacher. Vol. X, No. 4, Winter, 1966-67.
Vocational Homemaking Education Program Standards. Austin, Texas: Texas Education Agency, 1973.
Dictionary of Occupational Titles. Washington, D.C.: U.S. Department of Labor, 1965.

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[1] Clothing Assistant. Lubbock, Texas: Home Economics Instructional Materials Center, 1969.

DEFINITIONS OF TERMS

Behavioral objective - the expected measurable behavior that should result from successful completion of designated learning experiences.

Concept - an abstraction representing the world of objects and events and a means of organizing them into categories.

Evaluation experiences - activities which help determine the progress made toward the achievement of specific behavioral objectives.

FHA - Future Homemakers of America organization.

Generalization - a complete thought which expresses an underlying truth, has an element of universality, and usually indicates relationships. Generalizations help give meaning to concepts.

Learning experiences - purposeful activities that have meaning for students at their developmental level and result in some degree of growth toward behavioral objectives.

Resources - teaching materials, books, pamphlets, journals, visual aids, and other instructional materials needed to carry out the suggested learning experiences and to reach behavioral objectives.

Taxonomy of educational objectives - a system for classifying behavioral objectives into hierarchies or levels of learning in three domains (cognitive, affective, and psychomotor).

TAXONOMY OF EDUCATIONAL OBJECTIVES

Levels of Learning

Recent trends in vocational education call for objectives which indicate exactly what changes in behavior should be expected from students. Such objectives may be developed and arranged in order of complexity according to the Taxonomy of Educational Objectives, a system for classifying behavioral objectives.

The Taxonomy of Educational Objectives is divided into three categories. These are the cognitive domain (thinking), the affectivee domain (feeling), and the psychomotor domain (doing). Each domain is then divided into a hierarchy of levels from least complex to most complex. Students must reach objectives which are least complex in a domain before they are able to master more complex objectives. To reach objectives at each level, students must have mastered learning at all the levels below.

The cognitive domain deals with knowledge and information and is divided into six levels of learning:[1] knowledge, comprehension, application, analysis, synthesis, and evaluation. Each of these is explained more fully on page 11. The hierarchal aspect of the cognitive domain is illustrated in the following example: Students must know and understand basic facts about nutrition before they can apply them in planning nutritious family meals.

The affective domain which deals with attitudes and appreciation is divided into five levels of learning:[2] receiving, responding, valuing, organization and characterization. These levels are explained on page 12. The hierarchy in this domain may be illustrated as follows: A student must be receptive and responsive to maintaining good health before he values having good health, relates health to personal appearance, or allows his desire for good health to direct his behavior to the point that he chooses nutritious meals and snacks and tries to get plenty of rest.

---

[1] Bloom, Benjamin S. Taxonomy of Educational Objectives, Handbook I: Cognitive Domain. New York: David McKay Company, Inc., 1956.

[2] Krothwohl, David R.; Bloom, Benjamin S.; and Bertram, B. Masia. Taxonomy of Educational Objectives Handbook II: Affective Domain. New York: David McKay Company, Inc., 1964.

Levels of learning included in the psychomotor domain, the manipulative skill areas, are still being developed. One author[3] has identified possible levels in the psychomotor domain as follows: perception, set, guided response, mechanism, and complex overt response. Explanations of these suggested levels are found on page 13. The hierarchy in the psychomotor domain may be illustrated as follows: The teacher may demonstrate threading a sewing machine while students perceive what she does. Next the student prepares himself physically, mentally and emotionally to respond. The student then imitates the teacher or follows directions. Practice is required until he can thread the machine with little conscious effort. Finally, the student develops such a high degree of skill that he threads the machine automatically and with confidence.

Objectives in all three categories (cognitive, affective and psychomotor) should be included when planning units in homemaking education. Cognitive and affective domains can easily be included in all areas of homemaking. The psychomotor domain is applicable primarily in the teaching of skills, particularly in the areas of food services and clothing services. Behavioral objectives aid in planning learning experiences as well as in planning evaluation items to measure the degree to which students have achieved these objectives.

The inclusion of objectives at the higher levels of learning as well as at lower levels is another important consideration in curriculum planning. Unfortunately, the memory aspects of learning often dominate the curriculum. Research has shown that a large portion of memorized material is forgotten rapidly and that students are often unable to apply memorized material when it is needed. For example, a student may know many facts about nutrition without being able to make nutritious food choices for himself in the school cafeteria. As a result of spending excessive time at the memory level, many teachers tend to offer students little opportunity to develop their capacities at higher levels. To improve the intellectual climate of her classroom, the teacher must consciously include objectives at the higher levels of learning in each domain and provide the necessary learning experiences to enable the students to reach the objectives.

Objectives at the lower levels of the affective and psychomotor domains (Affective, Receiving and Responding and Psychomotor, Perception and Set) are difficult to measure. Therefore, the teacher may find it easier to measure only cognitive objectives at the lower levels. However, opportunities should be provided through learning experiences for students to develop in affective and psychomotor areas. For example, the teacher may present a demonstration on using classroom equipment safely. This learning experience not only develops the student's cognitive knowledge about safety, but gives him the opportunity to receive information on the importance of safety and to observe the physical procedures involved in the safe use of the equipment. Because the affective and psychomotor aspects are difficult to test at this level, the teacher may only ask the student to list safe procedures for using the equipment demonstrated, a Cognitive-Knowledge-level objective.

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[3] Simpson, Elizabeth J. "Classification of Educational Objectives, Psychomotor Domain," Illinois Teacher. Vol. X, No. 4, Winter, 1966-67.

LEVELS OF LEARNING

Cognitive Domain[1]

EVALUATION

Ability to judge the value of ideas, procedures, methods, etc., using appropriate criteria.

SYNTHESIS

Ability to put together parts and elements into a unified organization or whole. May involve production of a new communication, a plan of operation, or a set of abstract relations.

ANALYSIS

Ability to break down a communication into constituent parts to make organization of idea clear. May include identification of parts, analysis of relationships between parts, and recognition of organizational principles involved.

APPLICATION

Ability to use ideas, principles, theories, in particular and concrete situations.

COMPREHENSION

Ability to understand or grasp the meaning of what is being communicated and make use of the idea without relating it to other ideas or materials or seeing its fullest meaning. May involve translation, interpretation, or extrapolation.

KNOWLEDGE

Ability to recall, to bring to mind the appropriate material. Involves remembering a wide variety of previously learned materials from specific facts to complete theories.

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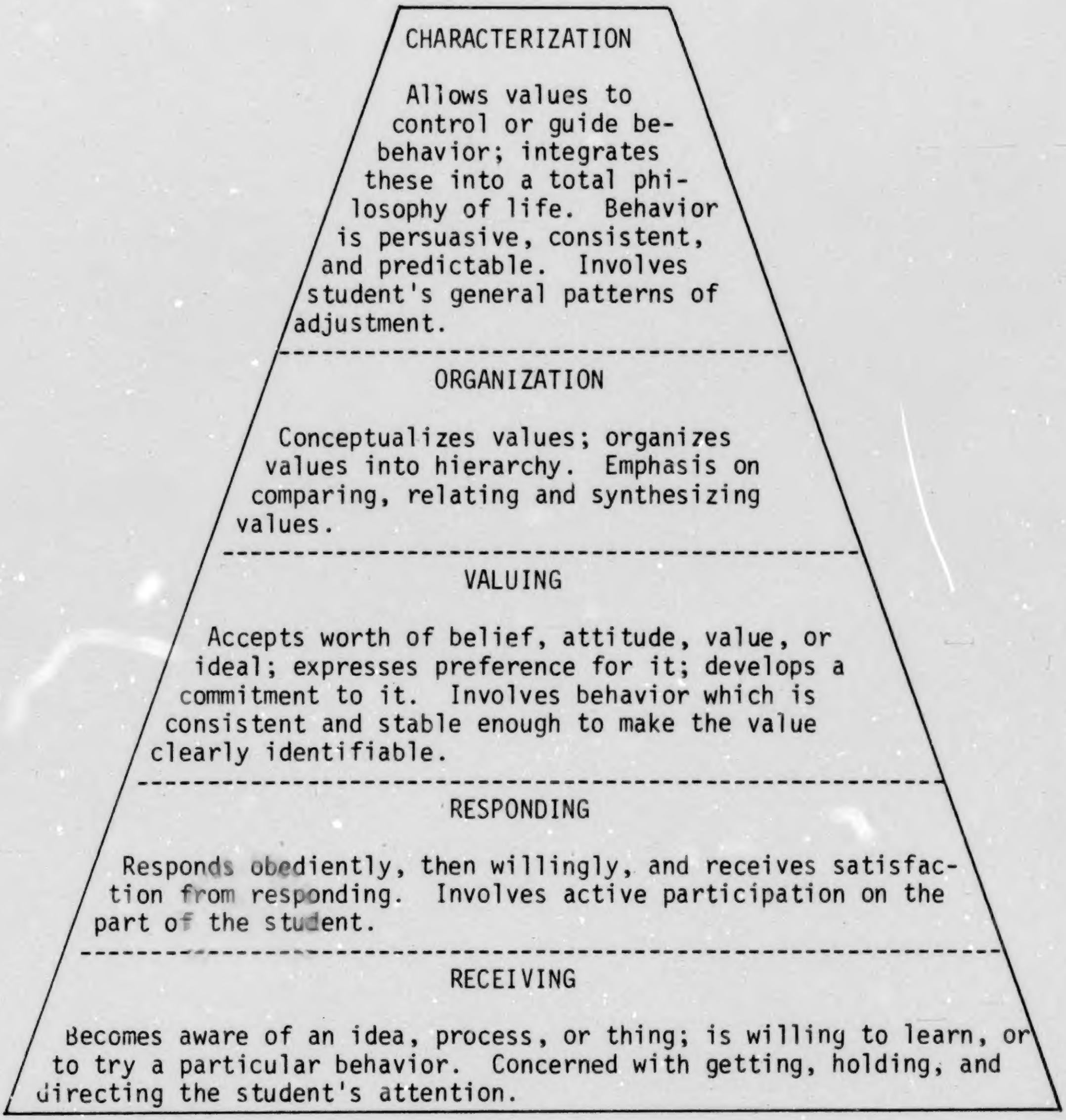
[1] Adapted from Bloom, Benjamin S., ed. Taxonomy of Educational Objectives, Handbook I: Cognitive Domain. New York: David McKay Company, Inc., 1956.

LEVELS OF LEARNING

Affective Domain[1]



CHARACTERIZATION

Allows values to control or guide bebehavior; integrates these into a total philosophy of life. Behavior is persuasive, consistent, and predictable. Involves student's general patterns of adjustment.

ORGANIZATION

Conceptualizes values; organizes values into hierarchy. Emphasis on comparing, relating and synthesizing values.

VALUING

Accepts worth of belief, attitude, value, or ideal; expresses preference for it; develops a commitment to it. Involves behavior which is consistent and stable enough to make the value clearly identifiable.

RESPONDING

Responds obediently, then willingly, and receives satisfaction from responding. Involves active participation on the part of the student.

RECEIVING

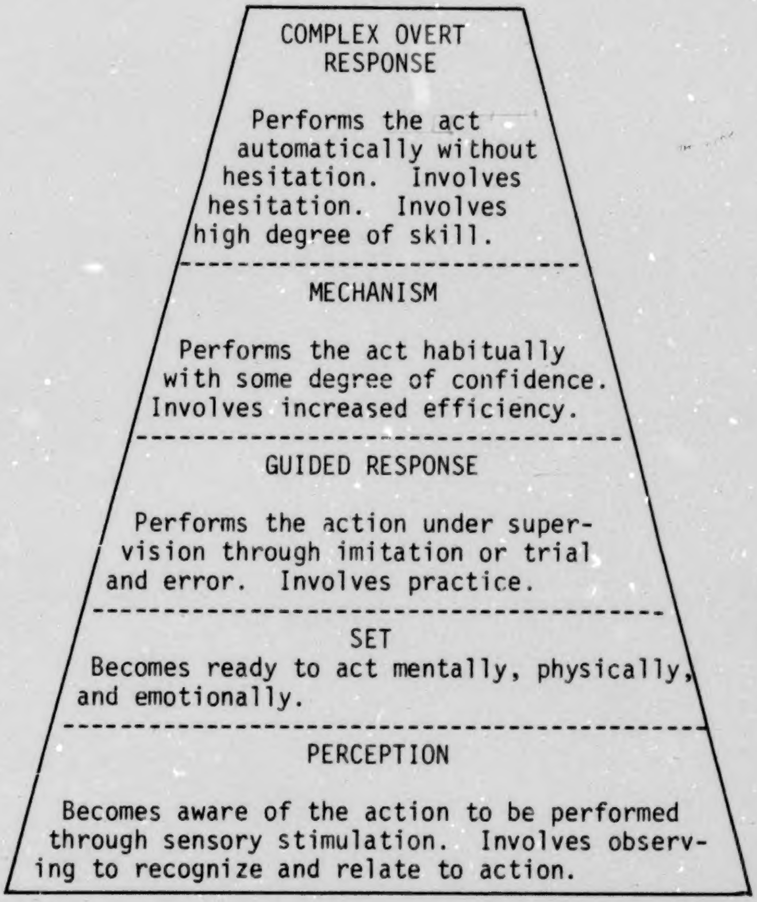
Becomes aware of an idea, process, or thing; is willing to learn, or to try a particular behavior. Concerned with getting, holding, and directing the student's attention.

---

[1] Adapted from Krathwohl, David R.; Bloom, Benjamin S.; and Masia, Bertram B., Taxonomy of Educational Objectives, Handbook II: Affective Domain. New York: David McKay Company, Inc., 1964.

LEVELS OF LEARNING

Psychomotor Domain[1]



COMPLEX OVERT RESPONSE

Performs the act automatically without hesitation. Involves hesitation. Involves high degree of skill.

MECHANISM

Performs the act habitually with some degree of confidence. Involves increased efficiency.

GUIDED RESPONSE

Performs the action under supervision through imitation or trial and error. Involves practice.

SET

Becomes ready to act mentally, physically, and emotionally.

PERCEPTION

Becomes aware of the action to be performed through sensory stimulation. Involves observing to recognize and relate to action.

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[1] Adapted from Simpson, Elizabeth Jane. "The Classification of Educational Objectives Psychomotor Domain," Illinois' Teacher of Home Economics, Vol. X, No. 4, Winter, 1966-67. pp. 110-144.

SUGGESTIONS FOR TEACHING CVAE STUDENTS

The following suggestions for teaching CVAE students have been made by experienced CVAE teachers:

Presenting Information

1. Handout sheets are more effective if key ideas are illustrated and the information is broken down into simple, meaningful steps which serve as aids to the slow reader.
2. Short phrases and sentences are more effective for learning materials than lengthy or detailed information.
3. Students and parents may serve as resource persons for class activities. This may be useful as a motivating technique. For example, a parent who is employed at a drycleaning or laundry establishment could explain his job responsibilities to the class.
4. Former students' experiences may be utilized through taped interviews and pictures of students on the job. Hearing or seeing a success story may help the student understand how he will benefit from the CVAE program.
5. Visits to training stations of cooperative CVAE students provide students with an opportunity to see an actual job setting and to become familiar with available jobs.
6. Mirromatics (mirrors placed around the room) may provide motivation in grooming and posture.
7. Repetition is a necessary technique; however, the teacher should use a variety of learning experiences to present each concept.
8. Resource people who can explain procedures in simple terms should be used whenever possible.
9. Field trips can be a motivating tool, if well planned. The student should be given information or a check sheet on points to observe. Knowing what to expect enables the student to derive maximum benefit from the experience.
10. Samples of projects can be prepared in advance for use in teaching students how to construct or prepare the item. These are most effective when broken down into steps with a sample for each step. Samples need to be the actual size to be produced in class, since students may not be able to transfer what is seen from scale models.
11. When reading level is suitable, articles from newspapers, magazines, and pamphlets may be used to present information.
12. Tapes can be used to present panel discussions, interviews, or other information when resource persons cannot attend class.

Involving Students

1. Pictures or slides of students involved in class activities may encourage self-evaluation and serve as a motivating factor. Students often see positive or negative behavior in pictures better than when they actually occur.

2. Variety in activities helps maintain the student's interest level. Alternate activities which involve movement with those which do not. Also alternate group work with individual work.

3. Tape recording a lab without the student's knowledge gives students the opportunity to evaluate themselves at a later time.

4. Rewarding the students immediately for their successes provides necessary reinforcement. A reward might be as simple as, "That's good work. I'm proud of you."

5. Lesson plans should provide more than enough activities for the entire class period.

6. Assignments for tasks should be specific, and if they are of a daily nature, a rotation chart should be utilized to insure that each student has the opportunity to perform all tasks.

7. Physical involvement is always a part of lab situation; however, the teacher should provide for physical involvement of students during all phases of the CVAE program. Examples: Use students as aides during demonstrations; allow students to set up audio-visual equipment; provide games for students to play that would serve as reinforcement for learning or as evaluation.

8. An activity should be repeated if students show an interest in doing so and repetition is justifiable.

9. Students should be given opportunities to arrange bulletin boards and "dress" display windows using their projects.

10. Simulated experiences provide learning which can be transferred to actual situations.

11. A "wishing well" for student wishes or a "druthers" box may be used to provide additional opportunities for communication between students and teacher.

12. Magazine illustrations can be used effectively to inspire discussion.

13. Students should be encouraged to present class demonstrations whenever possible.

Using Group Work

1. Class activities maybe integrated with overall school projects. Examples: enter a contest the school is sponsoring; press choir robes; help with stage decorating; place pictures and articles in the school newspaper.

2. Class projects may be chosen which benefit the school, such as making jumpers for P. E. classes, patching shop aprons, sewing cushions for teacher's chairs. Assembly line techniques should be used in such projects whenever possible.

3. Special events such as socials, field trips, or special privileges maybe planned as class rewards.

4. A system of rewards may be developed for CVAE students. Tokens or points may be collected which will allow the student to obtain special privileges, tickets to school events, concessions, etc.

Using Visual Aids

1. Students should be encouraged to produce some of the visuals for class. Provide the necessary materials for making the visuals.

2. Students may be allowed to set up audio-visual equipment on a rotation basis. Set aside a time to demonstrate the operation of audio-visual equipment.

3. If the exact script is read along with filmstrips, students may have a tendency to become bored. Hit the major ideas and dispense with the rest. Pause for student questions during the filmstrip, as needed.

4. Students enjoy hearing their own voices on tape. Make use of tapes during role play, practice interviews, etc. Tapes may be saved and played again later to show progress.

5. Transparencies are particularly helpful in working with the problem reader. Through the use of overlays, material can be easily broken down into segments.

6. Flash cards are an effective method of reviewing terminology related to equipment and tools.

7. Flip charts showing step-by-step procedures are helpful even to the teacher, who finds herself giving the same directions repeatedly.

8. Filmstrips are often more effective than films because concepts can be discussed and explained during filmstrips.

9. In grading written assignments, be sure to acknowledge correct answers as well as incorrect answers.

10. When self-evaluation is utilized, a comparison with the teacher's evaluation is beneficial and encourages honesty and objectivity.

11. The student's attendance during each grading period should be evaluated as a part of his pre-employment training.

12. Smile and frown symbols indicating correct and incorrect responses may be used to evaluate the students. Use of such symbols may be less negative and more easily understood than other methods of rating.

13. Check lists, rating scales, and questionnaires can be used by students for self-evaluation.

Managing the CVAE Classroom

1. A student management system may be planned cooperatively with students. Job designations such as supervisor, equipment manager, inspector, and others may be made.

2. Plan a regular classroom routine and try not to vary from it.

3. The CVAE classroom should be operated as if were a business. Students might even be expected to punch a time clock and be responsible for their use of break time.

4. All directions should be stated in simple terms.

5. Laboratory experiences should be broken into simple steps.

6. Extra activities and projects should be provided for faster students.

7. Students should have a definite place to keep their personal materials such as paper, pencils, and notebooks.

8. Definite instructions must be given for using money box for cash receipts from projects.

9. Parent permission slips for field trips or other outside activities should be used to keep parents informed of such activities.

CONCEPTUAL FRAMEWORK

For

CVAE CLOTHING SERVICES

I. Orientation to CVAE Clothing Services

    A. CVAE Clothing Services

    B. Job Opportunities in Clothing Services

        1. Alterations
        2. Dressmaking
        3. Industrial Sewing
        4. Laundry and Drycleaning
        5. Packing and Storing

II. Sewing Tools and Equipment

    A. Small Tools

        1. Measuring
        2. Cutting
        3. Marking
        4. Sewing

    B. Domestic Sewing Machines

        1. Straight Stitch
        2. Zig-zag

    C. Commercial Sewing Machines

        1. Lockstitch
        2. Serger
        3. Blindstitch

    D. Pressing Equipment

        1. Irons
            a. Hand Irons
            b. Steam Press
            c. Puff Iron
            d. Form Finisher
        2. Pressing Surfaces
            a. Ironing Board
            b. Sleeve Board
            c. Needle Board
            d. Point Presser
            e. Pounding Block

3. Contoured Pressing Cushions
    a. Tailor's Ham
    b. Seam Roll
    c. Press Mitt
4. Press Cloths

E. Sewing Safety

1. Clothes for Safety
2. Safe Equipment Use
3. Lifting Techniques
4. Electrical Cords

III. Basic Sewing Skills

A. Hand Stitching

1. Types
2. Uses
3. Techniques

B. Domestic Machine Stitching

1. Straight Stitch
2. Zig-zag Stitch

C. Commercial Machine Stitching

1. Lock Stitch
2. Serging
3. Blindstitch

D. Finishing Techniques

1. Machine Attachments
    a. Hemmer
    b. Binder
    c. Ruffler
    d. Cording Foot
    e. Buttonholer
2. Decorative Machine Stitching
    a. Decorative Border Stitches
    b. Monogramming
    c. Appliques
    d. Top Stitching
3. Decorative Hand Stitching
    a. Embroidery
    b. Beading
    c. Saddle Stitching
    d. Decorative Tacks

IV. Custom Clothing Construction

  A. Basic Information

    1. Textiles
      a. Natural Fibers
      b. Manmade Fibers
      c. Special Fibers and Fabrics
    2. Taking Body Measurements
    3. Commercial Patterns
    4. Line and Color

  B. Garment Construction

    1. Management in Construction
      a. Organization of Work
      b. Unit Construction
    2. Fabric Preparation
    3. Pattern Use
      a. Fitting and Altering
      b. Placement
      c. Cutting
      d. Marking
    4. Pressing
      a. Pressing Techniques
      b. Construction Pressing
      c. Final Pressing
    5. Basic Construction Techniques
    6. Fitting

  C. Customer Relationships

    1. Records
    2. Personal Qualities
    3. Attitudes

V. Assembly Line Production

  A. Steps in Garment Production

  B. Time-saving Techniques

VI. Alteration and Repair

  A. Techniques

    1. Tags, Markings, and Symbols
    2. Ripping Out Stitches
    3. Basic Repair Stitches
    4. Hand Stitches Used In Alterations

B. Garment Repairs

    1. Patching
    2. Darning
    3. Repairing Rips in Seams
    4. Reinforcing Seams
    5. Repairing and Replacing Pockets
    6. Repairing and Reinserting Zippers
    7. Replacing Fasteners

C. Alteration of Men's and Women's Clothing

    1. Skirt and Coat Length
    2. Darts
    3. Bustline
    4. Bodice Length
    5. Waistline and Hip Line
    6. Trouser Length
    7. Crotch and Trouser Leg
    8. Trouser Waistline
    9. Suit Coat Length
    10. Suit Coat Width
    11. Suit Coat Sleeve Length

VII. Laundering and Dry Cleaning

A. Receiving, Sorting, and Marking

B. Laundry Procedures

    1. Laundry Aids
    2. Sorting
    3. Pretreating
    4. Stain Removal
    5. Operating Washing Machines
    6. Operating Dryers
    7. Finishing

C. Dry Cleaning Procedures

    1. Sorting
    2. Pre-spotting
    3. Dry cleaning
    4. Tumbling or Airing
    5. Spotting
    6. Finishing

D. Inspection, Assembling, and Bagging

VIII. Packing and Storing Clothes

A. Supplies

1. Containers
    a. Bags
    b. Boxes
    c. Trunks
2. Hangers and Tissue Paper
3. Moth Preventives

B. Seasonal Storage

1. Commercial
2. Home

C. Packing for Travel

1. Organization
2. Packing Procedures

SECTION TWO

INSTRUCTIONAL MATERIALS

CONCEPT: Orientation to CVAE Clothing Services

JUSTIFICATION:

To be prepared to seek employment most suitable to the individual, the student needs to be aware of the varied job opportunities in clothing services. He should also be aware of the tasks or activities performed in various occupations. This knowledge will enable the student to select from available jobs a job suitable for his skills and interests.

OVERALL OBJECTIVES:

Note classroom procedures, purposes, and possible projects for CVAE Clothing Services (P-P)

Relate class activities in CVAE Clothing Services to the world of work (C-Ap)

Pursue information on occupations in clothing services available in the community (A-Rec)

Explain the relationship of the tasks and skills to be learned in CVAE Clothing Services to those required in specific occupations (C-C)

CVAE Clothing Services

KEY IDEAS:	CVAE Clothing Services aids the student in acquiring basic skills for employment. CVAE Clothing Services gives the student experience on equipment used in clothing service occupations. Projects in CVAE Clothing Services acquaint the student with situations similar to those he would encounter in actual job experiences.

WORDS TO KNOW:	clothing services	equipment	skills
	project	facilities	occupation

Behavioral Objectives	Learning and Evaluation Experiences
Cite the purposes of CVAE Clothing Services (C-K)	Note the purposes of CVAE Clothing Services as outlined by the teacher. Name five purposes of CVAE Clothing Services.
Cite class routine for CVAE Clothing Services (C-K)	Listen as teacher describes the class routine to be followed in CVAE Clothing Services. Where should you place your personal belongings when you come to class? What are you expected to bring to class? How will roll be taken? How will you determine your duties each week? How long before the end of class should you begin straightening the room?
List rules to be observed in CVAE Clothing Services (C-K)	Study a handout sheet on rules to be observed for CVAE Clothing Services. What safety rules are to be observed? What procedures are to be used in checking out books? What rules apply to student conduct?
Name projects and activities in CVAE Clothing Services (C-K)	Look at samples of student projects which have been prepared in CVAE Clothing Services.
Give examples of possible projects for CVAE Clothing Services (C-C)	Brainstorm to give examples of projects appropriate for CVAE Clothing Services. Possibilities include costumes for drama class or club, choir robes, garments for charity organizations, boutique items such as fabric purses, and accessory items.

Behavioral Objectives	Learning and Evaluation Experiences
Identify classroom equipment and facilities used for CVAE Clothing Services (C-K)	Study a labeled diagram of classroom equipment and facilities. Note the purpose or use of each piece of equipment or each facility.
Identify equipment and facilities in the classroom (C-K)	Work in teams to become familiar with the physical classroom arrangement. Use a labeled diagram of the classroom to locate equipment, storage areas, and facilities used for CVAE Clothing Services. See which team is first to locate all facilities labeled on the diagram. Have a team member point out the location of each labeled facility.
Relate each facility or piece of equipment to the world of work (C-Ap)	Read of job situations which illustrate how what is learned in CVAE Clothing Services applies to actual jobs. (See p. 28.) Relate what you will study in CVAE Clothing Services to each job situation.

Clothing Service
Job Situations

Read each situation aloud and discuss the questions which follow it.

Situation #1

Jill works in a drycleaning establishment as an alterationist. She fits garments to customers and does the necessary alterations. At times she is asked to reinforce knees and elbows in garments, replace buttons, or replace trim on garments. She works with many different fabrics and types of garments.

What topics to be studied in CVAE Clothing Services would help Jill in her job? What equipment in the CVAE clothing lab would she use? Do laundries or drycleaners in your community have alterationists?

Situation #2

Janie is a housewife with two small children. She has a dressmaker's studio in her home where she constructs clothing for other persons. This allows her to combine her role as a homemaker with an occupation as a custom dressmaker. She also does alterations on clothing.

What would Janie need to know that would be different from what Jill needs to know in her job? What topics would Janie need to study to be a good dressmaker? Name some dressmakers in your community.

Situation #3

Julie works in a dress shop as an alterationist. Mrs. Brown just bought a velvet evening dress which needs to be taken up in the waist. Julie has never worked with velvet before and is a bit nervous about altering the expensive dress.

How would knowing about different kinds of fabric help Julie alter Mrs. Brown's dress? Do you know someone who does alterations in a dress shop in your community?

Situation #4

Joan works in a small dressmaking establishment. Most of the work is done on domestic machines, but the establishment does own a lockstitch machine and a serger. Joan is ready to finish the seams on a polyester knit pant suit.

How might Joan's experience in CVAE have helped her get a job in this dress factory? Are job opportunities available in garment factories in you community or nearby?

Situation #5

Margie works in her home as a custom dressmaker. Mrs. Moore has just brought her a pattern and fabric for a new dress. Margie took Mrs. Moore's measurements and is now ready to begin working on the garment. The fabric Mrs. Moore brought is a metallic blend. Margie has never worked with this type of fabric before.

What topics might Margie have studied in CVAE which would help her in working with various fabrics?

Job Opportunities in Clothing Services

KEY IDEAS:

Skills acquired through the CVAE Clothing Services program contribute to employability in clothing service occupations.

A variety of employment opportunities are available in clothing services.

An awareness of clothing service occupations aids the student in selecting a job in this area suitable for his skills and interests.

WORDS TO KNOW:

- alterationist
- custom dressmaker
- assembly-line worker
- sewing machine operator
- spotter
- presser
- inspector
- cutter
- bagger
- equipment operator

Behavioral Objectives	Learning and Evaluation Experiences
Identify job opportunities in clothing services (C-K)	Look at filmstrips, transparencies, bulletin boards, or handouts identifying jobs related to clothing services. (See p. 32.) Check the telephone book to find where job opportunities in clothing services might be available. View magazine illustrations depicting clothing service occupations. What is the person in the picture doing? What is this person's occupation? How is his occupation related to clothing services? Make a list of jobs and places of employment available for a person in clothing services.
Describe clothing service occupations (C-C)	Brainstorm to describe tasks involved in specific occupations related to clothing services. Discuss ideas with the class.

Behavioral Objectives	Learning and Evaluation Experiences
Give examples of skills needed for clothing service occupations (C-C)	Work in teams to explain skills needed in various clothing service occupations. Draw a slip of paper on which a clothing service occupation is printed. Brainstorm to give examples of skills needed in this job.
Relate activities in CVAE Clothing Services to actual occupations (C-Ap)	Show how class activities help prepare the student for jobs. Work with a partner to relate one specific class project or activity to clothing service occupations. What skills are involved in the class activity which are also involved in a clothing service occupation?

Tasks Performed	Employer					
	Laundry	Drycleaner	Clothing or Dept. Store	Industry	Homemaker	Self
Receiving and tagging	X	X				
Sorting and marking	X	X			X	
Pre-treating garments	X	X			X	
Operating laundry and cleaning equipment	X	X			X	
Spotting	X	X			X	
Storing garments	X	X			X	
Following commercial pattern						X
Spreading, marking, cutting fabric				X		X
Operating sewing machine	X	X	X	X		X
Constructing custom clothing						X
Fitting garments			X			X
Repairing garments	X	X	X		X	X
Altering garments	X	X	X			X
Performing hand sewing on garments	X	X	X	X	X	X
Pressing garments	X	X	X	X	X	X
Inspecting garments	X	X		X		X
Bagging garments	X	X		X		X
Packing garments					X	
Planning sewing room or area						X
Selecting equipment						X

CONCEPT: Sewing Tools and Equipment

JUSTIFICATION:

The CVAE student must be familiar with sewing tools and equipment and know how to safely use and care for them to be qualified for a clothing service job. Factory supervisors explain that after a specified training period, an employee must be able to safely operate and care for equipment to retain his job. The worker who uses equipment properly and gives it reasonable care reduces breakdown time, increases production, and receives higher earnings. Accidents and misuse of equipment are expensive to the employer and weigh heavily when promotions and raises are considered. Alteration persons and custom dressmakers must also be skilled in using and caring for tools and equipment to perform their jobs efficiently.

Safety in use and care of equipment must be a principal consideration both in the CVAE classroom and in clothing service jobs. Employers prefer safe and efficient workers, and when safety rules are followed there are fewer chances for accidents to occur. Accidents result in personal injuries, lost time, and decreased earnings; whereas, safe procedures contribute to personal safety, increased production, and higher earnings. Safe, proficient workers protect themselves and others from injury and the equipment they use from damage.

OVERALL OBJECTIVES:

Relate each piece of sewing equipment to its use or uses (C-Ap)

Accept responsibility for caring for sewing tools and equipment (A-V)

Choose to follow safety rules in handling and operating sewing tools and equipment (A-V)

Apply safety rules in handling and operating sewing tools and equipment (A-Ap)

Use sewing tools and equipment safely and efficiently (P-M)

Small Tools

KEY IDEAS:

Selection of appropriate sewing tools and equipment contributes to the success of any sewing project.

Knowing uses of sewing tools aids in choosing the proper tool for a specific task.

Convenient and efficient storage of equipment contributes to efficiency in performing sewing tasks.

WORDS TO KNOW:

buttonhole scissors
cutting shears
electric cutting shears
embroidery scissors
pinking shears
ripping scissors
seam ripper
tailor's shears
thread clips or nippers
tailor's chalk
tracing paper
tracing wheel
cuff marker
curved rule
hem gauge
hem marker (pin type)
sewing gauge
tailor's square
tape measure
transparent dressmaker's ruler
underarm rule
yardstick
belt eyelet punch
emery bag
loop turner
model form
needles
pin and needle cushion
pins
thimble
thread

Behavioral Objectives	Learning and Evaluation Experiences
Identify small sewing tools (C-K)	Study small sewing tools as teacher holds up each item and states its name. Repeat the name of each tool. Find each tool on the handout sheet. (See p. 37-40.) View a filmstrip showing small sewing tools and their classifications for use in cutting, marking, measuring, or sewing. Participate in a game to identify small equipment. Draw the name of a piece of small equipment from an envelope, and place it on the appropriate item. Play the word-search game. Study the game sheet to find the names of sewing equipment. Circle each word located. The student who finds the most words in the allotted time or who finishes first is the "Equipment Expert." (See p. 41.)

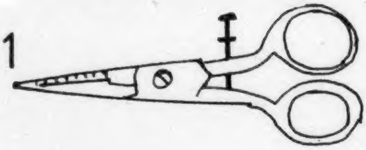
Behavioral Objectives	Learning and Evaluation Experiences
Identify characteristics for selecting small sewing equipment (C-K)	Visit a fabric store that has a variety of sewing equipment. Divide into groups with each group looking at a particular item such as thread, needles, pins, shears, etc. Note the different types of thread, pins, needles, shears available. What determines the type of thread to buy? (Use of thread, basting or sewing, color of fabric, type of fiber)
	Observe a display of good and poor sewing equipment (a frayed tape measure, a stretched one, shears that do not cut well, blunt needles, and bent pins to contrast with the good equipment). Point out good and bad characteristics of sewing equipment observed.
	List characteristics to look for in selecting small sewing equipment.
Explain uses of the small sewing tools (C-C)	Study a garment and give examples of places on the garment where the tools might have been used.
Identify the storage areas for small equipment in the laboratory (C-K)	Tour the laboratory to observe storage of small equipment. Note where each piece of equipment is stored.
	Participate in a scavenger hunt using prepared lists to locate small sewing tools in the CVAE laboratory.
Match equipment with its use (C-K)	Work in teams to prepare a bulletin board or display showing small equipment. Use pictures or actual pieces of equipment. Label the picture or piece of equipment and classify it according to its use.
	Categorize small equipment according to its use by placing the appropriate equipment in front of large posters displayed on tables labeled "cutting", "marking", "measuring", or "sewing".

Behavioral Objectives	Learning and Evaluation Experiences
	Reach into a drawstring bag and feel a sewing tool. Identify the item. Remove the tool and state its use. (Do not use sharp objects.)
	Test your knowledge of equipment by matching the name of each piece of small equipment listed with the picture of that item.

SMALL SEWING TOOLS AND THEIR SPECIFIC USES

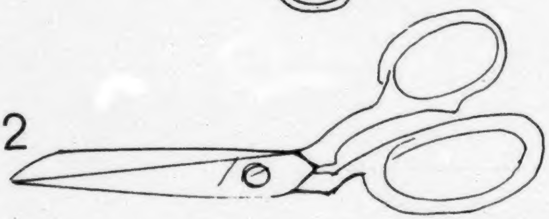
Cutting:

1



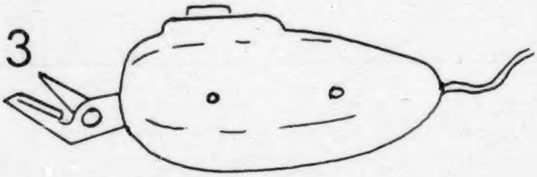
1. Buttonhole scissors--used to cut buttonholes open. May be adjusted to cut different-sized buttonholes.

2



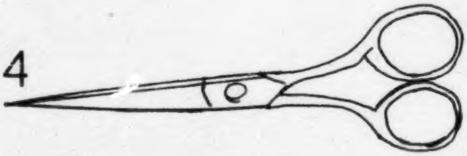
2. Cutting shears--used for cutting out garment. Should have a bent handle with a small ring handle for the fingers. Dressmarker's shears' blades vary from 6-1/2 in. to 7 or 8 in. in length. The blades of Tailor's shears are longer.

3



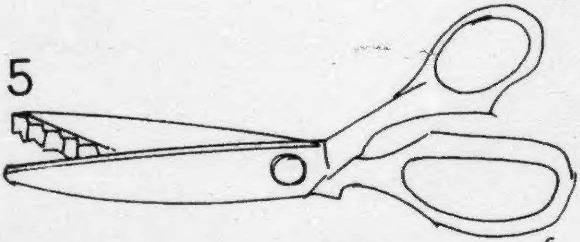
3. Electric cutting shears--used for cutting out fabric. Plug into household outlet or battery operated.

4



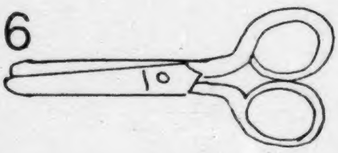
4. Embroidery scissors--used for fine trimming, needlework, and embroidery. Usually 3-4 inches long.'

5



5. Pinking shears--used to finish seams that ravel. Have zigzag edges. Available in lengths from 5-1/2 to 10 inches.

6

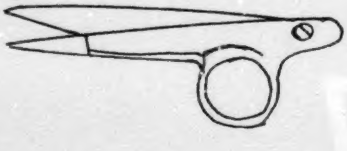


6. Ripping scissors--used to rip out seams without cutting the fabric. They have blunt ends.

7

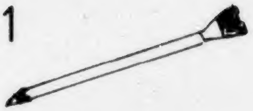
7. Seam ripper--used to rip out stitching.

8

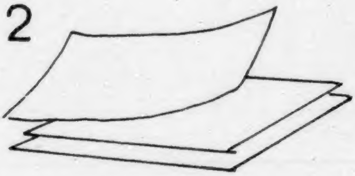


8. Thread clips or nippers--used to snip threads and make small clips needed for marking or for curved seams. Have one ring which fits over the little finger. Operated by squeezing with the palm of the hand.

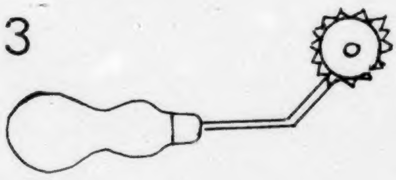
Marking:



1. Tailor's chalk--used for marking on fabric which cannot be marked with carbon. Made in flat 2-inch squares in white, black, red, and blue, or in pencil form.

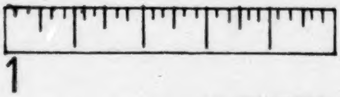


2. Tracing paper--carbon paper used to mark fabric. Comes in many different colors.

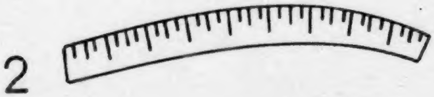


3. Tracing wheel--used to roll along pattern markings and transfer them through the tracing paper to the wrong side of the fabric. Comes in smooth edge, needle-point edge, and saw-tooth edge.

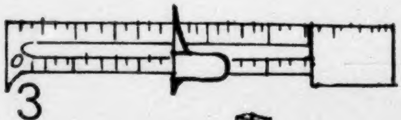
Measuring :



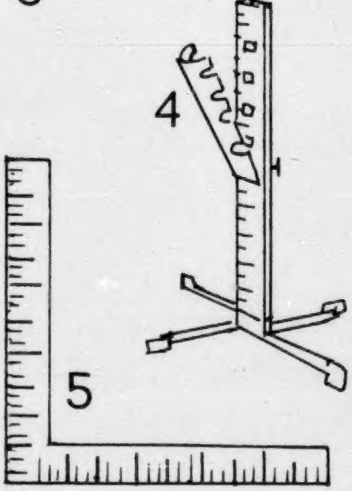
1. Cuff marker--used to measure the width of cuffs on garments.



2. Curved rule--used to measure curves.

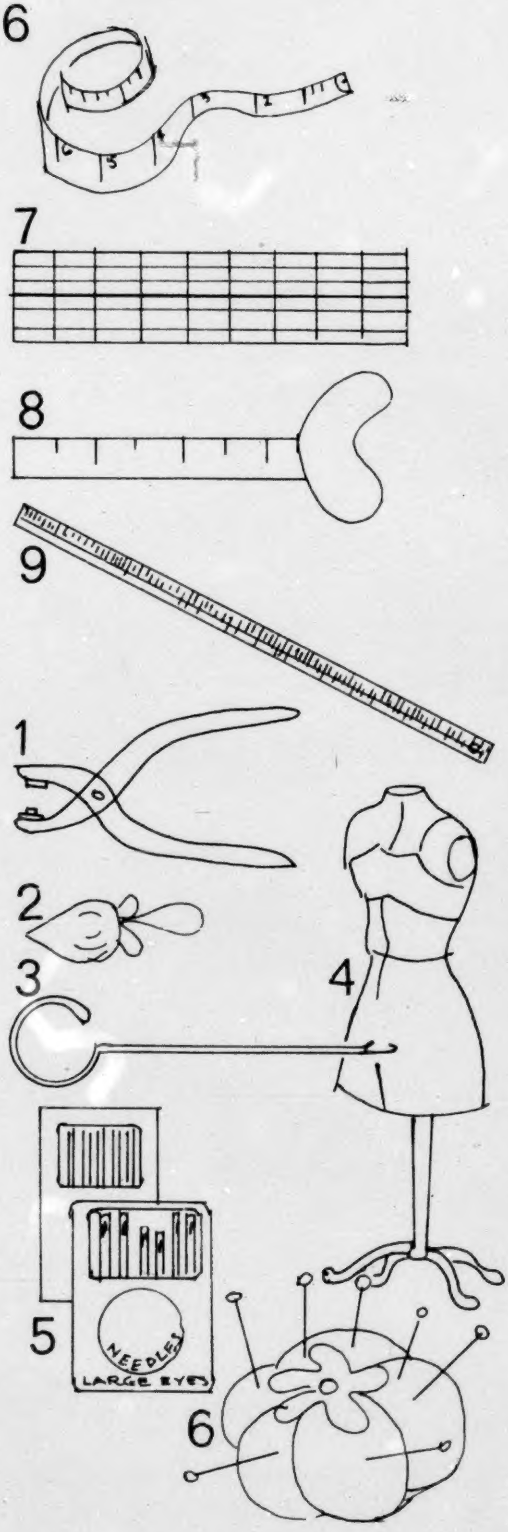


3. Hem gauge--used for measuring hems, and lengths under 6 inches.



4. Skirt marker (pin type)--used for marking hemline.

5. Tailor's square--guide for measuring accurate angles.



6. Tape measure--used for measuring long lengths. Select oil cloth or plastic, 60 inches long with numbers printed on both sides of the tape, and with metal tips.

7. Transparent dressmaker's ruler--used for measuring when it is necessary to see through the measuring device.

8. Underarn rule--used to measure arm length.

9. Yard stick--used to measure straight surfaces, as in checking grain lines. Should have a smooth finish so will not catch fabric.

Sewing:

1. Belt eyelet punch--used for putting eyelets in belts.

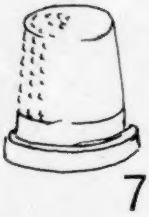
2. Emery bag--used to remove rust from pins and needles. Sometimes attached to pin cushion.

3. Loop turner--used for turning belts and loops.

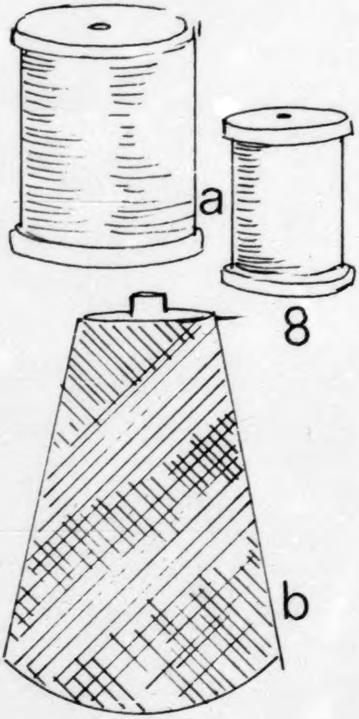
4. Model form--used for fitting garments.

5. Needles--come in sizes and types according to use.

6. Pin and needle cushion--storage for pins and needles which keeps them convenient while working. Can be bought in wrist type.



7. Thimble--used for pushing needle through fabric during hand stitching and to protect finger.



8. Thread--comes in different fibers and weights suitable for certain types of fabric. a) spool--used for home sewing; b) cone--used mainly in commercial establishments.

WORD SEARCH GAME - SMALL TOOLS

DIRECTIONS: Find the words listed below in this word search game. The words may be spelled vertically or horizontally. Circle the name of each item located.

```
M U T S A N T O Q T E S S A C D F G J I K E Z T R Q T N
Z Y S E B E L T E Y E L E T P U N C H T A C M A E U A R
A Y E L E C O T R I C Q P H D X W G E F T E N O A M I S
N R H I C D O A A E T D D R H D H E M M A R K E R O L U
S E I K M T P M O D Y J Y E N R O A G T P S Q M Z T O A
Y L J T U S T X Z S M P H A T C A J A F E X B E E A R I
L E B J S W U M O X S V C D Z R T N U D M L J R M S S Z
W C K Q C U R V E D R U L E F D Y E G R E W X Y B M S Q
L T P N U K N E U K C U F F M A R K E R A L R B R X Q E
R R C N T I E V A Q Y U A Z K J M L P C S R R A O A U M
X I X B T R R N G W E N O N Y D X V B R U X I G I V A H
D C S G I Z N T M M O D E L F O R M U T R D P C D E R I
J C F S N U J K R V R E U Z A V M H Z A E J P D E V E Y
N U E R G A E S E A M R I P P E R R N E A N I M R H Z K
Y T P W S C L T H R E A D C L I P S Y U G Y N X Y R N Y
O T O Y H D F R B F T R A C I N G P A P E R G C S K Y A
U I Q T E E W O G L E M I W R F S B N Y R D S T C W N R
Z N I A A J T A I L O R S S H E A R S S O U C Y I B T D
M G E I R I U W X I B U T T O N H O L E S C I S S O R S
D S R N S H N S C C V L V L W E Y E T W S Z S L S V Z T
R H G C R G P C P N A E Q R J E E L Z I Y M S C O E F I
M E P I N K I N G S H E A R S D K V F N Z D O N R T L C
T A I L O R S C H A L K D J A L O H L G Q M R S S H P K
U R Z T R A C I N G W H E E L E Z R P G V U S E N I A L
G S A Q C E R O L G J L P I N S E B A A I G N O Y M F E
P I N A N D N E E D L E C U S H I O N U U Q K Y G B N A
Q S U Z O L F Q J L E R X T P L V R F G B A Q O F L B N
T R A N S P A R E N T D R E S S M A K E R S R U L E R J
```

WORDS TO LOCATE:

belt eyelet punch
buttonhole scissors
cuff marker
curved rule
cutting shears
electric cutting shears
embroidery scissors
emery bag
hem gauge
hem marker
loop turner
model form
needles
pin and needle cushions
pinking shears
pins
ripping scissors
seam ripper
sewing gauge
tailor's chalk
tailor's shears
tailor's square
tape measure
thimble
thread
thread clips or nippers
tracing paper
tracing wheel
transparent dressmaker's ruler
underarm rule
yardstick

DOMESTIC SEWING MACHINES

KEY IDEAS: Knowledge of the parts of domestic sewing machines contributes to learning to use them.

Proper care of sewing equipment keeps it operating efficiently.

WORDS TO KNOW:

straight stitch
zigzag
machine head
cabinet
hand wheel
foot control
knee control

presser foot
presser foot lifter
bobbin
bobbin case
bobbin winder
feed dog

throat plate or combination needle plate
bed slide plate or hinged case cover
light

Behavioral Objectives	Learning and Evaluation Experiences
Identify the types of stitches made by domestic sewing machines (C-K)	Look at the domestic machines in the laboratory. Look at stitching samples produced by the domestic sewing machine. What differences do you observe in the stitches?
Name the basic machine parts of domestic sewing machines (C-K)	Watch as the teacher points out the parts of the domestic machines in the laboratory. Cite the name of the part as the teacher points it out. Work in pairs to locate the basic machine parts. As one member of the team calls out the part, the other member points it out. Upon completion of the list, team members switch roles.
Identify the proper care procedures for domestic sewing machine (C-K)	Observe a demonstration on the proper care of the domestic sewing machine. After the demonstration, state five rules for caring for the domestic sewing machine. (Include correct procedure for plugging and unplugging equipment.) View a filmstrip and/or slides on the care of the domestic sewing machine. Note the procedure used in caring for the machine.

Behavioral Objectives	Learning and Evaluation Experiences
	Work in teams to prepare checklists for each domestic sewing machine, titled "Things to Check Before Starting." List should include such procedures as 1) Check plug--make sure cord is not frayed, no wires are exposed, and prongs of the plug are straight before plugging it into the socket. 2) Be sure machine parts are free from lint. 3) Be sure machine is threaded properly. (Refer to owner's manual for other items.)
Identify the aids needed for caring for the equipment (C-K)	Place in each machine drawer the special tools and aids needed for servicing the domestic sewing machine.
Practice caring for the domestic sewing machine (P-GR)	Carry out the checklist procedures for caring for the machines.
	Make a rotation chart dividing responsibilities for care of the machines. Assume responsibility for each duty when it is your turn.

COMMERCIAL SEWING MACHINES

KEY IDEAS:

Efficiency and safety are promoted by the employee's knowledge of the equipment.

Proper care of equipment contributes to smooth plant operation and increased production.

Specialized power sewing equipment produces a high-quality product in a minimum amount of time.

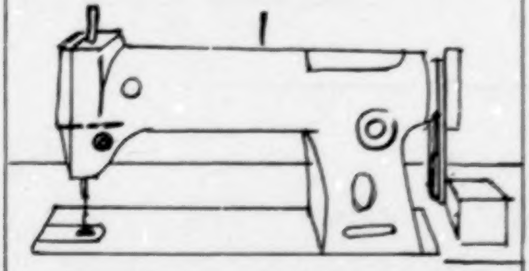
WORDS TO KNOW:

- machine head
- machine table
- motor
- drawer
- thread stand
- switch
- knee lift
- electrical plug
- electrical cord
- treadle
- light
- clutch
- brake
- oil-fill screw
- oil gauge
- oil can
- motor pulley
- lockstitch machine
- bobbin
- hand wheel
- presser foot
- throat plate
- feed dog
- belt
- serger
- blindstitch machine

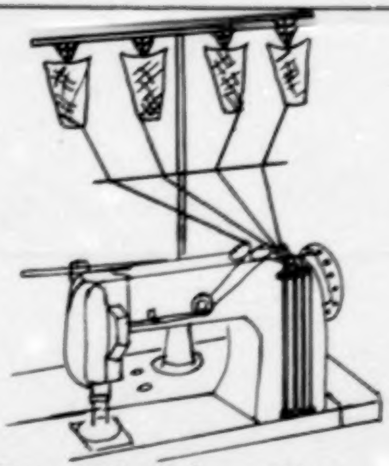
Behavioral Objectives	Learning and Evaluation Experiences
Cite uses of power sewing machines (C-K)	Listen as the instructor names the power sewing machines and indicates the differences between power sewing machines and domestic sewing machines. Find each power sewing machine on a handout sheet. (See p. 47.) View the power sewing equipment and the domestic equipment available in the lab.
Identify machine parts common to most power sewing machines (C-K)	Observe common machine parts as the instructor points them out on one type of power machine. Practice naming these parts. Locate each basic part of a different power sewing machine as the instructor calls out the following: machine table, machine head, motor, drawer, thread stand, switch, knee lift, treadle, light, and electrical cord. Rotate to a third machine and locate the same basic parts.

Behavioral Objectives	Learning and Evaluation Experiences
Name the two basic types of power machines (C-K)	View a transparency on the characteristics of the lockstitch and the cablestitch. (See p. 48.) Note: How many threads does the lockstitch have? What does the lockstitch look like on the under side? Does the lockstitch machine use a bobbin? Will the lockstitch ravel out easily? Does the lockstitch have to be straight stitching? Does the cablestitch look the same on both sides of the material? How many threads does each machine use? Is there a bobbin on cablestitch machines?
Give examples of lockstitches and cablestitches (C-C)	Look at the garment you are wearing, and describe the stitch types.
Identify the lockstitch, serger, blindstitch, and chainstitch machines (C-K)	Listen as the teacher identifies the commercial sewing machines in CVAE clothing laboratory.
	Practice naming each commercial sewing machine as the teacher points to it.
List the characteristics of the lockstitch, serger, blindstitch, and chainstitch machines (C-K)	Listen carefully as the instructor indicates the characteristics of each power machine. Note: How many threads does the machine use? Is there a bobbin? Does the machine have more than one needle?
	Watch as the instructor operates each machine to produce a stitching sample. Look at the stitching sample made by each machine. Which stitch is the same on top and bottom? What other machine makes a stitch like this one? Which machine finishes the edges of material? Which machines produce stitches that can be raveled out? Which machine folds the material and stitches the seam at the same time?
	View a transparency showing diagrams of stitches made by the lockstitch, doublechainstitch, serger, and blindstitch machines.

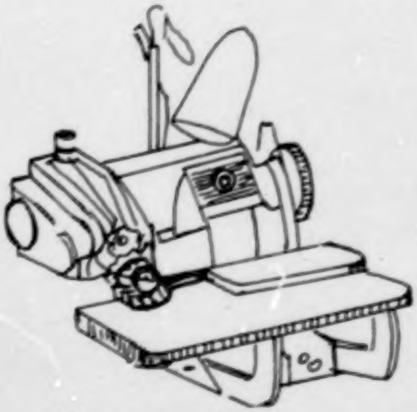
Behavioral Objectives	Learning and Evaluation Experiences
Identify machine type by the stitch it produces (C-K)	Look at labeled lines of stitching on a garment, and name the type of machine which produces each stitch.
Cite procedures for cleaning power sewing machines (C-K)	Note the procedures as the instructor demonstrates how to clean each power machine. Note the tools that are stored in the lockstitch machine drawer.
State procedures for oiling power sewing machines (C-K)	Notice the steps in oiling each power machine as the instructor demonstrates. (See machine manuals.) For each machine note the following: How often must the power sewing machine be oiled? Is this a self-oiling machine? If so, where is the oil gauge? Why are there different sizes of oil cans? How can you recognize most oiling holes? What will happen if you don't clean off drips of oil?
Describe the machine portions to be oiled (C-C)	Check the oiling chart for each power. machine. Note places each machine should be oiled.
Carry out oiling and cleaning procedures on each power sewing machine (P-GR)	Divide into pairs. Practice oiling and cleaning the power sewing machines in the CVAE clothing lab.
Be willing to take responsibility for maintaining the power sewing machines (A-V)	Clean and oil the power sewing machines following a duty rotation chart.
	Initiate oiling of machine if the "sound" indicates it is needed. Dust and polish the head of the machine without being required by the duty chart to do so.



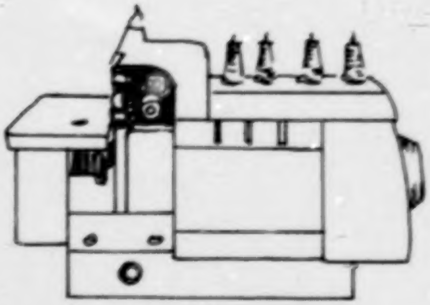
Lockstitch



Double Needle Chainstitch



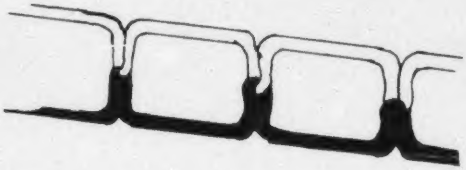
Blindstitch



Serger

TRANSPARENCY

LOCKSTITCH MACHINES

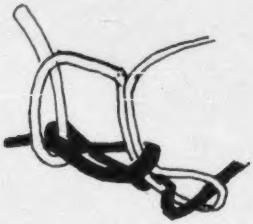


1. Top and bottom stitches are the same.
2. Must have a bobbin.
3. Stitches will not ravel. Stitches are not elastic.
4. Stitch can be a fancy zigzag.

Types of Lockstitch Machines

Single-needle
Double-needle (multi-needle)
Zigzag
Tacker
Buttonhole

CABLE STITCH MACHINES



1. Top and bottom stitches are never the same.
2. Does not have a bobbin.
3. Stitches ravel. Stitches are elastic.
4. Many different stitches can be made.

Types of Cablestitch Machines

Single-needle chainstitch
Double-needle chainstitch
Serger or overedge
Blindstitch

PRESSING EQUIPMENT

KEY IDEAS:

Knowledge of pressing equipment is essential for effectiveness in pressing and ironing.

Proper pressing tools are essential to good pressing techniques.

Correct use of proper pressing tools during construction will result in a professional-looking garment.

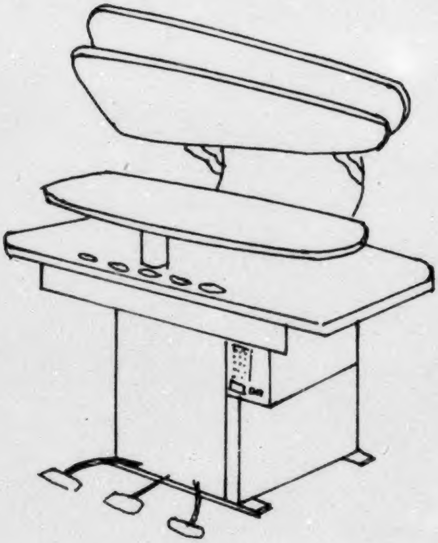
WORDS TO KNOW:

- apparel steamer
- combination point presser and block
- ironing board
- needle board
- point presser
- pounding block
- pressing board
- pressing cloths
- press mitt (sleeve mitt)
- Pressurized steam iron
- seam roll
- skirt board
- sleeve board
- spray, steam, and dry iron
- table-type press board
- tailor's ham

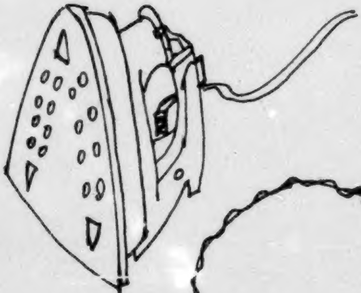
Behavioral Objectives	Learning and Evaluation Experiences
Identify equipment used in pressing (C-K)	View pieces of equipment illustrated on a flip chart. (See p. 51-53.) Locate the same pieces of equipment in the laboratory. Display by type the equipment located, such as irons, pressing surfaces, contoured pressing cushions, and press cloths. Observe a display of irons in the laboratory. Note the name of each iron.
Identify the controls on the irons (C-K)	Note the differences among the controls on several irons. How are they different? Are the controls labeled by fabrics, temperature, or both?
Describe the correct care and use of the iron (C-C)	Observe a demonstration on correct use of the irons, including plugging and unplugging, filling, setting controls, emptying after use, keeping sole plate clean. What safety precautions need to be observed in using irons?

Behavioral Objectives	Learning and Evaluation Experiences
Identify the pressing surfaces used in the laboratory (C-K)	View transparencies of the various pressing surfaces in the laboratory. (See p. 52-53.) Find each in a display of laboratory pressing equipment.
Cite the use of contoured pressing cushions (C-K)	View pictures or transparencies on the use of pressing cushions.
Explain the use of the pressing surfaces in the laboratory (C-C)	Observe a display of garments that need to be pressed. Illustrate where each of the pressing surfaces can be used in pressing a garment.
Try pressing samples using pressing equipment (P-GR)	Try pressing fabric samples with different pieces of pressing equipment. Press construction details using the appropriate equipment.
Prepare rules to follow in pressing (C-A)	Brainstorm to prepare a list of rules to follow in pressing such as 1) setting iron to correct temperature, 2) pressing each seam before sewing across it, 3) never pressing over a pin.

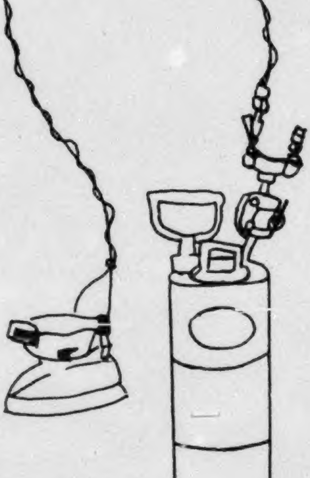
PRESSING EQUIPMENT



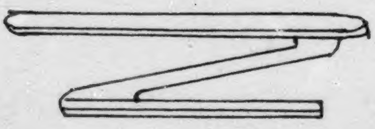
Apparel steamer



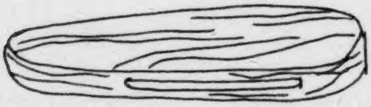
Spray, steam, and dry iron



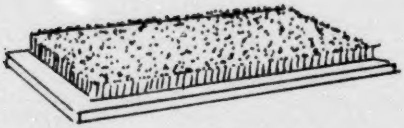
Pressurized steam iron



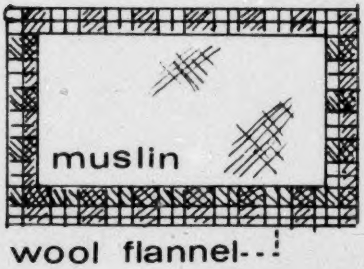
Skirt board



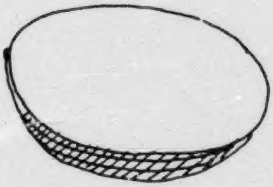
Pounding block



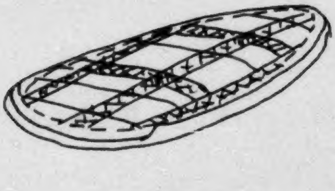
Needle board


muslin
wool flannel

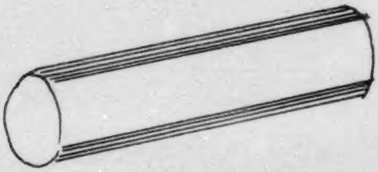
Press cloth



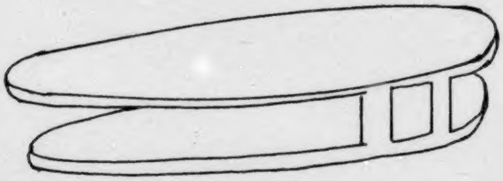
Tailor's ham



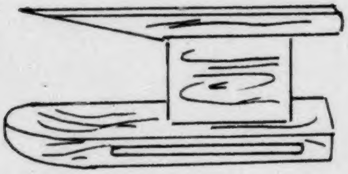
Press mitt



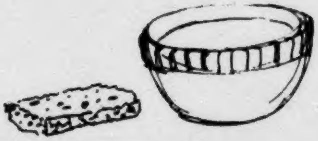
Seam roll



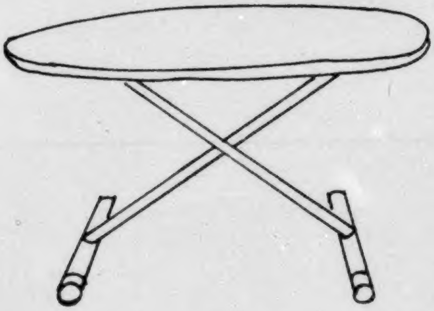
Press board



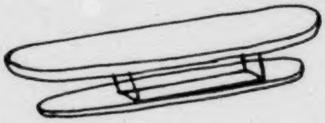
Combination point presser and block



Bowl with sponge



Ironing board



Sleeve board

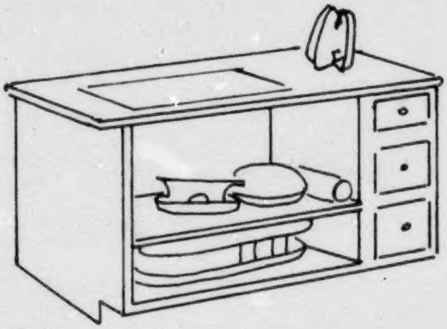


Table type press board

SEWING SAFETY

KEY IDEAS: Accidents and injury can be prevented through observance of safety precautions.

Enforcing safety precautions is the responsibility of every employee as well as the employer.

Sewing with safety and competence increases employability.

Electrical appliances with faulty wiring or worn cords can cause fires and painful burns.

WORDS TO KNOW:

safety
motor switch
unsafe
disassemble
repair
rules
parts
reassemble
operate
disconnect

Behavioral Objectives	Learning and Evaluation Experiences
List safety rules to be observed in the laboratory (C-K)	Study safety rules to be applied in the CVAE clothing laboratory such as the following: 1) Keep blades of scissors or shears closed when not in use. When giving them to another person, hold them by the point, so the person taking them may grasp them by the handle. 2) Keep pins and other sharp objects out of the mouth. 3) Practice good posture. 4) Keep long flowing hair from getting caught in the equipment by tying it back. 5) Hold plug, not cord, when disconnecting equipment. 6) Concentrate on the work while operating the machine. 7) Turn motor off when machine is not in use, when replacing a needle, or when threading. 8) Keep hands away from the needle. 9) Clean oil spills off the floor immediately. 10) Keep feet away from the treadle when threading the machine, 11) Avoid wearing clothing that can get caught in the machine. 12) Store equipment properly when not using. 13) Keep equipment in proper working order. 14) Connect machine plugs directly to the wall outlet, not to an extension cord.

Behavioral Objectives	Learning and Evaluation Experiences
Identify proper clothing for safe use of equipment (C-K)	Brainstorm to identify types of clothing that might be considered unsafe for the seamstress to wear. List these on the board as they are named. Tell why they might be unsafe. Include features such as loose sleeves, frilly blouses, flowing scarves, and tight girdle. Interview employers, and list types of clothing they consider suitable for the clothing service employee.
	Make a bulletin board showing proper and improper dress for an employee in clothing services.
	Play "Spin the Bottle" game to practice naming sewing safety rules. Class sits in a circle; leader spins the bottle. The person the bottle points toward must give a safety rule.
Explain the safe use of small equipment (C-C)	Illustrate "safe" and "unsafe" procedures in the use of small equipment, and display in the laboratory under "Safety Do's" and "Danger Don'ts."
Show how to use small equipment safely (C-Ap)	Give a demonstration on the use of a piece of small sewing equipment. Point out safety rules to be observed in using it.
Point out safety precautions to follow in using domestic sewing machines (C-K)	Observe the teacher demonstrating the correct safety procedures to follow in using a domestic machine.
Cite safety precautions to use in operating commercial sewing machines (C-K)	Watch a demonstration of "do's and don'ts" that apply to the commercial sewing equipment.
Describe safety precautions in operating domestic and commercial sewing equipment (C-C)	Discuss the safety rules to follow in operating the domestic and commercial sewing equipment in the classroom. Remind classmates of safety rules if they are observed using unsafe procedures.
Adopt safety precautions using sewing equipment (A-V)	Role play situations involving adherence to or abuse of safety precautions. Point out safety practices which were and were not followed in the situation.

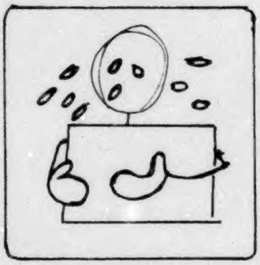
Behavioral Objectives	Learning and Evaluation Experiences
	Evaluate the use of safe procedures while working in the CVAE clothing lab by using a safety check sheet.
Identify safe lifting techniques (C-K)	Study instant-slides showing lifting techniques which do not strain muscles. (See p. 58-60.) List techniques illustrated.
	Listen to an article describing a sewing accident. (Articles may be obtained from factory safety bulletins or newsletters.)
	Discuss the causes of the accident and ways to have prevented it. What other accidents might occur when using power equipment? Other sewing equipment?
Give examples of lifting techniques to be observed (C-C)	Role play to depict the use of poor lifting techniques. Give characters names such as "Annie Fannie," which describe their lifting techniques. Replay to show lifting techniques which should have been used by each character.
Cite safety procedures for using commercial pressing equipment (C-K)	Observe a demonstration on correct safety procedures to use with commercial pressing equipment.
Cooperate in using safe practices with pressing equipment (A-Res)	Practice using the commercial pressing equipment in pairs, to check use of safety rules. Have student supervisors check use of correct safety procedures.
Identify the correct procedure for plugging and unplugging an electrical appliance (C-K)	Observe a demonstration on plugging and unplugging an electrical appliance. List steps in plugging and unplugging.
Explain how to correctly plug or unplug equipment (C-C)	Work in pairs to practice plugging and unplugging equipment correctly. Grasp the plug correctly for plugging or unplugging equipment. Let partner check the position of your hand.

Behavioral Objectives	Learning and Evaluation Experiences
Practice plugging and unplugging equipment (P-GR)	Ask your partner to observe as you plug and unplug a piece of equipment. Did you need to make any changes? If so, practice until you plug and unplug equipment correctly each time.
Obey safety rules in the clothing laboratory voluntarily (A-V)	Observe all safety rules consistently during your CVAE Clothing Services laboratory. Report to teacher if you observe a student not following safety rules. Adopt a safety code for using commercial pressing equipment. Honor a "Miss Safety" each month who has best exhibited safety habits in her work.

SAFE LIFTING TECHNIQUES

Instant-slides Sketches

1



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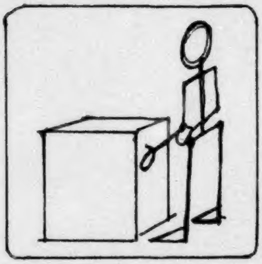

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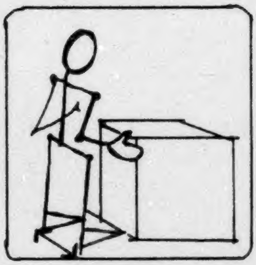

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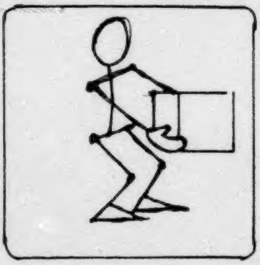

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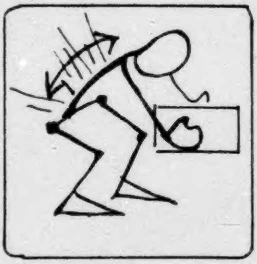

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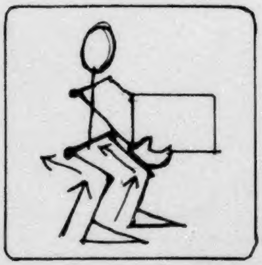

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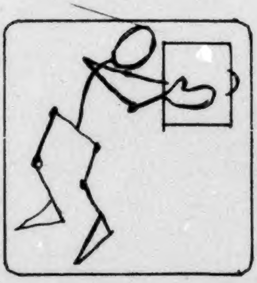

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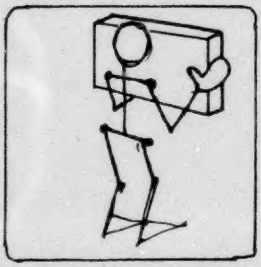

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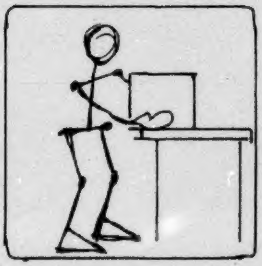

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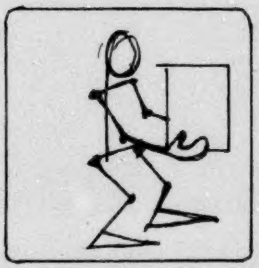

Script for
SAFE LIFTING TECHNIQUES

Lifting is one of the jobs done wrong more often than right. By always using proper lifting methods, employees can do their jobs easily and without injury.

Lifting, carrying, or placing large or heavy objects may result in an injury if not done properly. Whether a worker pulls a muscle, gets a "crick" in her back or twists a knee, it still hurts; she may lose time on the job, and such loss could have been prevented by using proper lifting techniques.

Proper ways to lift:

1. Size up the load first; do not attempt to lift it alone if there is any doubt in your mind about your ability to do so safely.
2. Place your feet close to the base of the object to be lifted. This is important because it prevents the back muscles from taking all the load.
3. Make sure that your footing is secure. Get a good balance by placing feet fairly wide apart (8 to 12 inches).
4. Bend the knees and squat.
5. Don't stoop. Keep the back straight and as nearly vertical as possible. If necessary, spread the knees or lower one knee to get closer to the object.
6. Now start pushing up with your legs, thereby using your strongest set of muscles. Keep the load close to your body as you come up. Lift the object to the carrying position.
7. If it is necessary to change direction when in the upright position, be careful not to twist the body.
8. Turn your body with changes of foot positions.
9. If you deposit the load on a bench or table, place it on the edge to make the table take part of the load, and then push it forward with the arms; or, if necessary, with part of the body in a forward position.
10. When putting the load down to the floor surface from a waist-high carrying position, bend the knees and with a straight back carry the load close to your body; lower the load with arm and leg muscles.

Making Instant Slides[1]

A series of instant slides may be made using this method at a very nominal cost. Twenty slides can be made for less than $1.00.

You will need the following materials:

A master copy

Acetate transparency film

Thermofax or any other transparency-making machine

Scissors

#127 slide mounts

Iron

Slide projector (Most filmstrip projectors have a slide attachment.)

You may duplicate the example of a master copy guide sheet we have included, or you may draw your own, being certain that the inside dimension is 1-7/16 inch square and the outer dimension is 1-11/16 inch square.

In order to prepare the master copy, you may illustrate your ideas by drawing, writing, printing, typing or pasting on pictures clipped from other sources inside the 1-7/16 inch squares. (See example on p. 58.)

When you have completed the master copy, cover it with a sheet of acetate transparency film and run it through a Thermofax copier or any other transparency-making machine.

Cut each frame on the outside lines, and place each section in a #127 slide holder. Seal the edges by ironing with a hot iron. (Professional slide sealers are available in some schools, but the hot iron will substitute adequately.)

If you want to add color to your slides, you may use colored grease pencils or crayons. Diazo may also be used to add color, or 3M Color self-adhesive film may be used to cover the entire slide.

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[1] The idea and directions for making instant slides were developed by Jeff Miller, Media Specialist, John H. Glenn Junior High School, San Angelo, Texas.

CONCEPT: Sewing Skills

JUSTIFICATION:

Sewing skills are essential in several clothing occupations. Persons employed as alteration and repair specialists in laundries and dry cleaners or as alterations persons in ready-to-wear or alteration shops need skill in both hand and machine sewing. Custom dressmakers must be highly skilled in sewing in order to construct the variety of garments desired by customers. Hand sewing skills and ability to operate power sewing equipment may aid one in getting a job in a garment factory.

Acquiring sewing skills needed for employment in clothing services involves knowledge of acceptable procedures, practice, and use of sewing skills until proficiency is acquired. Projects planned for CVAE Clothing Services should include opportunities for each student to acquire a variety of sewing skills and to have sufficient opportunity to practice until he can perform them with some degree of confidence.

OVERALL OBJECTIVES:

Execute basic sewing skills (P-M)

Exhibit a desire to follow correct procedures in executing basic sewing skills (A-V)

Compare quality of own work to set standards (C-An)

BASIC HAND STITCHING

KEY IDEAS: Each hand stitch performs a definite function in clothing construction.

The choice of hand stitch depends on the purpose for which it is used.

WORDS TO KNOW:

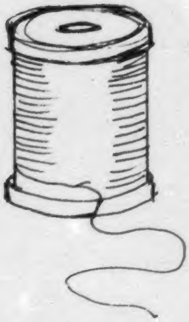
- hand stitching
- running stitch
- back stitch
- half back stitch
- catch stitch
- blindstitch
- slip stitch
- felling
- overcasting
- stoating
- lock stitch
- buttonhole stitch
- stab stitch

Behavioral Objectives	Learning and Evaluation Experiences
Identify equipment needed for hand stitching (C-K)	Name equipment needed for hand stitching.
Explain how to use hand sewing equipment (C-C)	Observe a demonstration on preparing to sew by hand. Find each step on handout (See p. 64-66.) as it is demonstrated: how a needle is threaded; how the thread length is determined; how a knot is tied; on what finger is the thimble worn; how threads are tied off.
Practice using hand sewing equipment (P-GR)	Attempt to thread a needle following instructions given by the teacher. Practice until you can thread a needle quickly and easily. Place the thimble on proper finger and practice hand stitching using the thimble.
List the basic hand stitches (C-K)	View transparencies illustrating basic hand stitches. Try to name each stitch as the teacher covers its name on the transparency. Name each hand stitch as a flash card illustrating that stitch is held up.
Cite uses of hand stitches on garmets (C-K)	Brainstorm to list places on garments where hand stitches may be used. List uses for each hand stitch.

Behavioral Objectives	Learning and Evaluation Experiences
List procedures for making various hand stitches (C-K)	View garments on which hand stitches have been used. What stitches were used? Where were they used? Watch demonstrations on how to execute various hand stitches.
Practice making basic hand stitches (P-GR)	Make basic hand stitches, such as running stitch, back stitch, blindstitch, and slip stitch on simple projects, such as coin purses. Use a variety of fabrics to see the result of the same hand stitch on different fabrics.
Gain skill in making basic hand stitches (P-M)	Use basic hand stitches in completing various class projects such as hand hemmed headscarves. (See p. 67-69.) Make hand-worked buttonholes using the buttonhole stitch. (See handout on p. 69.) Work to improve the quality of your hand stitches each time you use them.

JOB SHEET ON HAND STITCHING

Threading a Needle



Step 1. Wash hands, and clean fingernails.

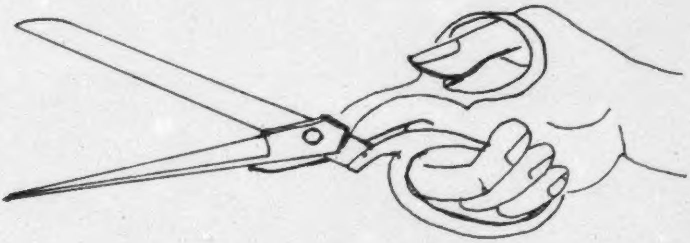
Step 2. Place spool of thread on the table in front of you. Loosen the end of the thread from the notch on the end of the spool.

Step 3. Hold the shears in your hand. NOTE: Directions are for a right-handed student. Reverse to the left hand if left-handed.

Place the thumb in the round handle.

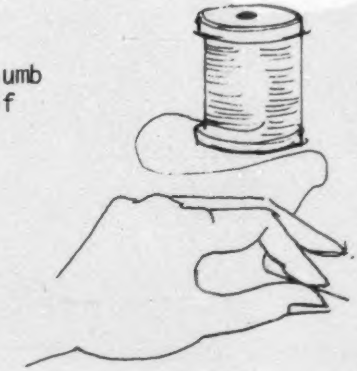
Place the first finger along the blade.

Place the other fingers in the big handle. You may use either two or three fingers.

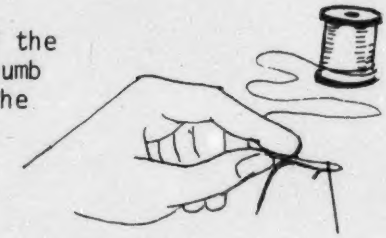


Step 4. Clip off the end of the thread at an angle. Use the point of the shears to do this. The angle helps prevent raveling and fraying of the thread. Do not break or bite the thread. Moisten the end of the thread.

Step 5. Hold the end of the thread between the thumb and first finger with just the very tip of the thread showing.



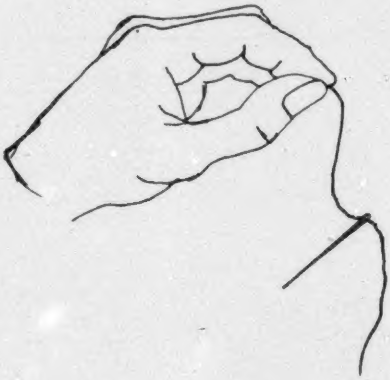
Step 6. Pick up the needle, and lay the eye of the needle onto the thread. Spread the thumb and finger slightly by straightening the first finger. The thread will go easily through the eye.



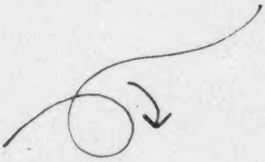
Step 7. Draw the thread about the length of the arm from the spool, and clip from the spool.

Tying a Knot

Step 1. Tie knots in the thread on the end that comes from the spool first to prevent tangling and twisting of the thread. Hold the end of the thread that you passed through the eye of the needle between your left finger and thumb of the hand.

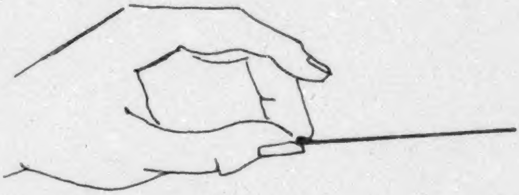


Step 2. Wrap the thread around the first finger of the left hand to meet the end of the thread and cross over the end.



Step 3. Press the thumb against the finger snugly but not tightly. Roll thread off the finger against the thumb and hold thread with the middle (second) finger. Pull the thread with the right hand, holding the roll. The knot will be on or near the end of the thread and should be fairly small.

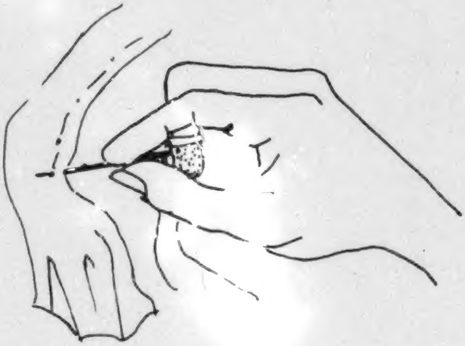
Holding the Needle for Stitching



Step 1. Hold the needle approximately in the middle between the thumb and the first or index finger with the eye end between the thumb and index finger. The point is away from the thumb and finger.

Step 2. Rest the eye end of the needle on the thimble that is worn on the middle finger.

Step 3. Use the thimble to push the needle through the fabric. The side of the thimble is used for fast work. The end of the thimble is used for slow or thick work.

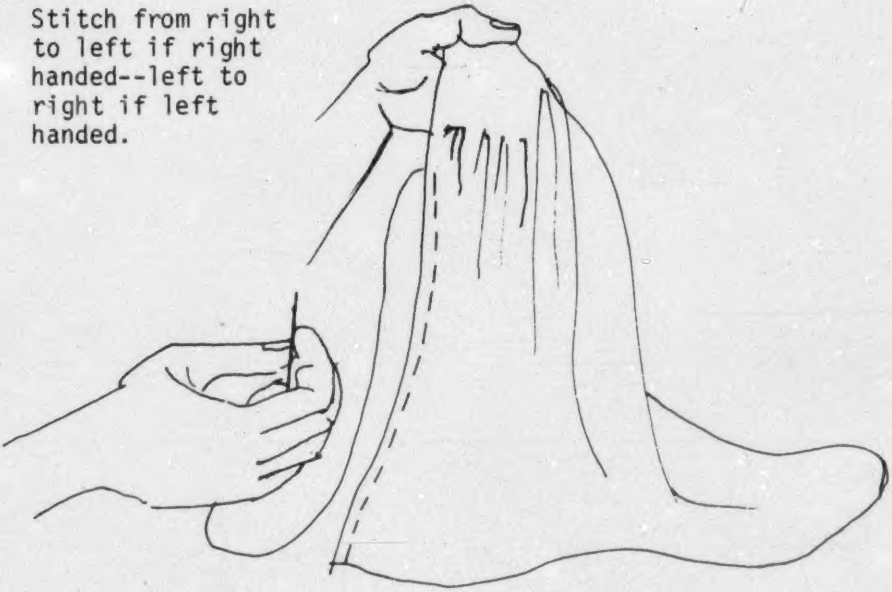


Holding Fabric to Hand Stitch

Step 1. Hold fabric loosely in one hand and needle and thread in the other. Turn fabric so that the edge you are stitching is nearest you.

Step 2. Place thumb on top of fabric and fingers under the fabric, and hold loosely in the hand. Let fabric rest on table to prevent weight from pulling the fabric from your hand.

Step 3. Stitch from right to left if right handed--left to right if left handed.



Tying Off to End Stitching

Step 1. Take a tiny stitch, leaving needle in material.

Step 2. Loop thread over end of needle.

Step 3. Pull needle through and pull thread tightly.

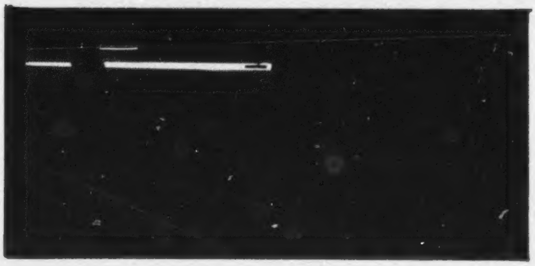
Step 4. Clip thread.

HAND STITCHES
(Transparencies)

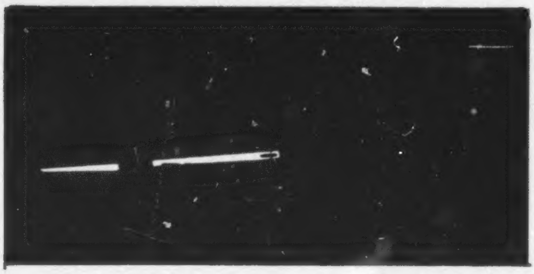
Running Stitch: Used for even or uneven basting, gathering, mending, or as decoration.

Even

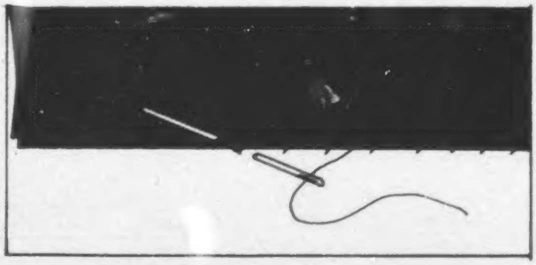
Uneven



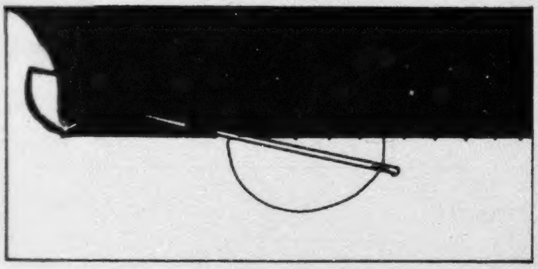
Backstitch: Used when a stitch as firm as a machine stitch is needed.



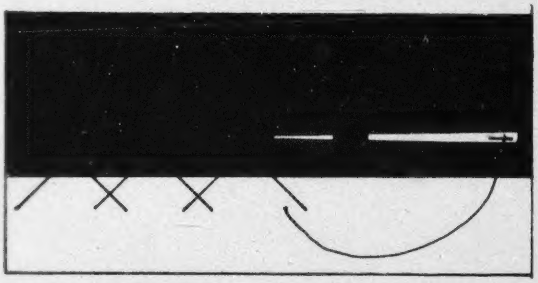
Blindstitch: Used on a turned edge where invisible sewing is needed, such as hems.



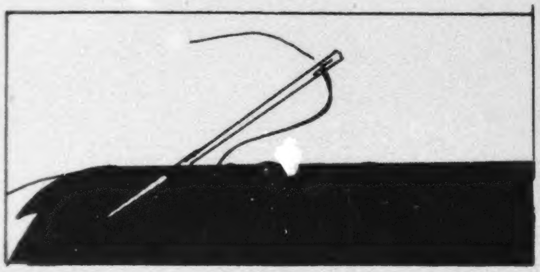
Slip-stitch: Used on a turned edge, such as a hem, or wherever invisible sewing is needed.



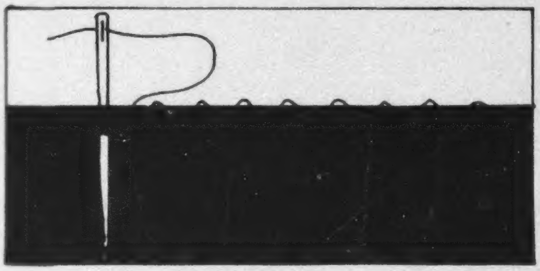
Catch stitch: Used to hold raw edges, such as on hems and interfacings, flat.



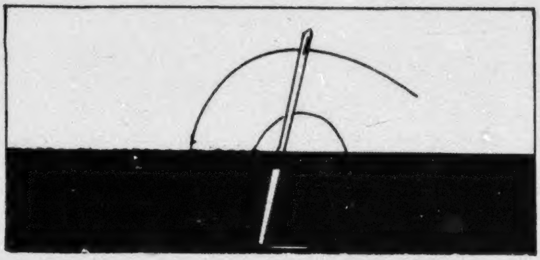
Felling stitch: Used as an invisible finishing stitch, such as for attaching linings to sleeves.



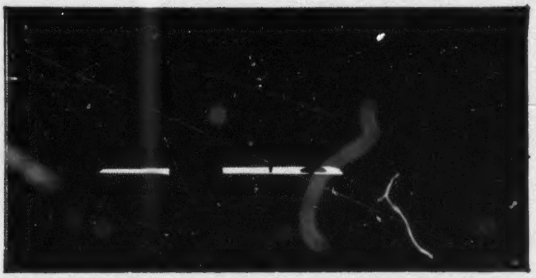
Overcasting stitch: Used to prevent raveling or fraying of the edges of the seams. Also used to attach snaps and hooks and eyes.



Buttonhole stitch: Used when making hand-worked buttonholes.



Lock stitch: Used to repair and finish seams that would be to difficult to reach from underneath.



Stoating stitch: Used to join two edges or to mend.

BASIC DOMESTIC MACHINE STITCHING

KEY IDEAS: The employee must know the basic parts of the machine in order to operate the sewing machine properly.

Good posture at the sewing machine prevents fatigue, increases ability to sew, and saves time.

Time and materials are wasted when the machine has been threaded incorrectly.

Accidents at the sewing machine are usually caused by carelessness.

WORDS TO KNOW:

foot control
knee control
head
cabinet
hand wheel
thread guides
light
bobbin
light switch
bobbin case
spool pin
bobbin winder
zigzag
bed slide plate or hinged case cover
presser foot
feed dog
needle thread tension
stitch length selector
take-up lever
machine needle
presser foot lifter
pivot
bight
throat plate or combination needle plate

Behavioral Objectives	Learning and Evaluation Experiences
Name the steps in setting up domestic sewing machine (C-K)	View slides on setting up the domestic sewing machine. Repeat the steps in setting up the domestic sewing machine. Observe one of the lab machines being set up. Note the steps followed. Study a handout on the steps in setting up a domestic sewing machine. (See p. 77.)
Describe the steps in setting up the domestic sewing machine (C-C)	Describe the steps in setting up the domestic sewing machine to a classmate. Did you leave out any steps? Did you get any steps out of order?

Behavioral Objectives	Learning and Evaluation Experiences
Practice setting up the domestic sewing machine (P-GR)	Practice setting up and putting away the domestic sewing machine following acceptable procedures.
Accept responsibility for setting up and putting away the domestic sewing machine (A-Res)	Take responsibility for setting up the machines, following a task-rotation chart without aid from teacher or fellow students. Voluntarily make extra effort to leave machine area neat at end of period.
Identify the parts of the domestic sewing machine head (C-K)	Observe teacher as she points out and identifies the parts of the domestic sewing machine head. Note differences and similarities among the different models of sewing machines.
	View slides or filmstrips showing parts of the sewing machine as the instructor explains their use.
	Name the parts of the machine as a classmate points to them. Gold stars will be given for correct answers.
Explain the parts of the domestic sewing machine (C-C)	Display a diagram of the domestic sewing machine on the bulletin board. Label the machine parts.
	Play the game, "What's My Line." Divide the class into two teams. Teams should be even in number, so an "odd" man could be score keeper. Illustrations of machine parts that have been drawn on cardboard are placed in a paper bag or box. One team member draws an illustration from the container and explains the use of the machine part. If his explanation is correct, the team receives one point. If any teammate can name the part, the team will receive an additional point. If a member of the first team does not answer correctly, the other team is given a chance to answer and to score a point.

Behavioral Objectives	Learning and Evaluation Experiences
Cite reasons for using proper posture at the sewing machine (C-K)	View a demonstration on proper posture at the sewing machine, which includes the following: Place a straight chair squarely in front of the sewing machine. Tilt forward from the hips. Keep all legs of chair flat on floor. Do not tilt the chair back. Place feet flat on the floor with the right foot on the foot control. Discuss why a good posture is necessary.
Depict proper machine posture through illustrations (C-C)	Draw on work sheet, stick figures indicating proper posture at the sewing machine.
Demonstrate proper posture while operating the sewing machine (C-Ap)	Practice sitting correctly at the sewing machine. Ask a classmate or teacher to check your posture and suggest improvements.
Complete the tasks necessary for a Beginner's License (P-M)	Check your progress by applying for Beginners Sewing License. (See p. 78.) Perform each task as your teacher indicates.
Cite procedure for stitching on paper without thread (C-K)	Watch a demonstration showing how to stitch on paper following a pattern of straight lines. Lines are placed 1/8 inch apart, 1/4 inch apart, 1/2 inch apart, and 5/8 inch apart. Watch the teacher demonstrating stitching on paper with a pattern of curved lines. Observe a teacher demonstrating stitching on paper with a pattern of lines with a 90 degree angle, to learn to turn corners or pivot.
Explain how to correctly situate a chart under the presser foot (C-C)	Select a stitching chart with straight lines. Position it under the needle. Lower needle first, then presser foot.

Behavioral Objectives	Learning and Evaluation Experiences
Try stitching straight lines without thread (P-GR)	Practice stitching straight lines on a stitching chart. (Do not watch the needle!)
Perform the task of operating a domestic machine by stitching on paper stitch charts (P-M)	Improve your control of the machine by stitching straight lines, curved lines, and by pivoting, using a pattern. Check your work to see how accurate your stitching was.
Name the parts of the domestic machine used in threading the machine head (C-K)	Watch a demonstration on threading the machine. Name the machine part orally as the instructor threads that portion.
	View slides or filmstrips on threading the domestic machine.
	Study handout sheets on the steps in threading the domestic sewing machine head, based on the machines in your classroom. (See machine manual.)
Illustrate the steps involved in threading the sewing machine head (C-C)	Use a colored felt-tipped pen to show on a diagram how to thread the sewing machine head.
Attempt to thread the machine head correctly (P-GR)	Practice threading the sewing machine head. Ask for assistance from your teacher if you have difficulty.
	Demonstrate threading the machine head to a classmate. Ask classmate to note any errors in threading. Check threading with an enlarged diagram.
Execute the steps in threading the machine head (P-M)	Thread the machine correctly while timing yourself. Take three timings, and underscore the best time. Compare your best time with those of classmates. Do you need more practice to increase your speed?
Name all the parts involved in filling the bobbin of the domestic machine (C-K)	View slides or filmstrips on filling the bobbin of the domestic sewing machine.

Behavioral Objectives	Learning and Evaluation Experiences
	Study steps in filling the bobbin and threading the bobbin case, given in hand*out sheets based on the machines in* your classroom. (See machine manual.)
Illustrate the steps in threading the domestic machine to fill the bobbin (C-C)	Study a worksheet with a diagram of the domestic machine. Use a colored felt-tipped pen to draw in the thread as it should be threaded for filling the bobbin.
Describe additional steps in filling a bobbin (C-C)	Explain each step necessary to fill a bobbin with your machine. Is releasing the balance wheel necessary on your machine? Is the presser foot lowered during filling? What part controls automatic bobbin winders?
Describe steps in threading the bobbin case (C-C)	Use an enlarged diagram of the bobbin area of your machine, and explain to the class each step in threading the bobbin case. Indicate whether the bobbin is placed with thread clockwise or counter clockwise.
Attempt the steps in filling the bobbin and threading the bobbin case (P-GR)	Practice filling the bobbin and threading the bobbin case following proper procedures.
Perform the task of threading the sewing machine and stitching on fabric (P-M)	Execute the following tasks with speed and accuracy: threading the machine head, filling the bobbin, threading the bobbin case, stitching on fabric with straight, curved, and 90 degree angle lines. Time yourself on each task.
	Apply for "Operator's License for Domestic Sewing Machine." (See p. 79.) Teacher will check your sewing skills and present your Operator's License or give you additional practice exercises, if needed. If the "Operator's License" is not obtained, play "Basic Skills Bingo" to review the sewing skills you have learned. (See p. 80.)

Behavioral Objectives	Learning and Evaluation Experiences
State how to test the tension of a stitch (C-K)	Observe a demonstration on testing stitch tension on a bias scrap. Note the following: scrap is folded on bias; two rows of stitching are done; scrap is stretched on bias. Note examples of stitching with correct and incorrect tension.
Describe correct tension (C-C)	Explain to a partner how the upper and lower threads lie when the tension is correct.
	Look at examples of stitching or fabric samples. Find examples illustrating correct tension and incorrect tension.
Duplicate the tension check on a fabric scrap (P-GR)	Practice the tension check following the procedures given in a demonstration. Test tension on a variety of fabrics. Note the differences among the fabrics.
Cite procedures for tension adjustment (C-K)	Observe a demonstration on correct method for adjusting tension. Note things to check before adjusting tension. (See p. 81.) How much should the tension be adjusted before checking again?
Practice tension adjustment (P-GR)	Use a different color of thread on the bobbin, and practice checking and adjusting the tension.
Execute proper changes in tension for three types of material (P-M)	Regulate tension for a sheer fabric, medium-weight fabric, and a heavy fabric.
	Make the tension check, and adjust the tension each time you sew on a different fabric. Check the tension before you begin to sew, if another student has used the machine to sew a different fabric.
Identify a zigzag stitching machine (C-K)	Observe a demonstration comparing straight stitch and zigzag machines. What major differences did you notice?

Behavioral Objectives	Learning and Evaluation Experiences
	How are controls set for making a zigzag stitch? How are special designs made on the zigzag machine?
	View examples on bulletin board of uses of the zigzag machine, such as seam finishing, mending, attaching trim, making seams in knits, and making decorative stitches.
Practice using a zigzag stitch (P-GR)	Set the controls to a wide, long zigzag stitch; change them to a short, narrow zigzag stitch.
	Practice making zigzag stitches and adjusting length and width of stitches. Practice turning corners by leaving the needle at the highest point.
Use the zigzag stitch (P-M)	Apply rick rack with zigzag stitch; mend a garment using zigzag stitch; finish a seam with zigzag stitch.

SETTING UP THE MACHINE

1. Remain standing while setting up the machine.
2. Using the left hand raise the lid and open it out flat.
3. Lift the front hinged section with the left hand.
4. Raise the head of the machine carefully with the right hand.
5. Place the front hinged section in place with the left hand.
6. Bring the head down to rest on bed of machine.
7. Plug in cord.

PUTTING MACHINE AWAY

1. Clear loose threads and pins from the machine bed.
2. Lower needle into felt scrap and lower presser foot.
3. Remove the cord.
4. Using the right hand lift the machine head.
5. Using the left hand raise the front hinged section.
6. Lower head into cabinet carefully.
7. Lower the front hinged section to flat position.
8. Lower the machine lid.

BEGINNER'S LICENSE FOR DOMESTIC SEWING MACHINE OPERATOR

____ had completed the following tasks successfully:

1. Demonstrated her ability to set up the machine correctly
2. Identified at least fifteen machine parts correctly
3. Demonstrated correct posture at the sewing machine
4. Demonstrated her ability to put the machine away properly

She is hereby granted her beginner's license to train on the domestic/commercial machines in the CVAE lab under my supervision

Signed:

____
CVAE Teacher

OPERATOR'S LICENSE FOR DOMESTIC SEWING MACHINE

______________________________________ has completed the following tasks sucessfully:

_____ 1. Threaded her machine accurately

_____ 2. Threaded bobbin correctly

_____ 3. Started the machine correctly; lowered needle; lowered presser foot

_____ 4. Demonstrated her ability to stop the machine by sewing one stitch at a time

_____ 5. Demonstrated her ability to stitch a 10-inch straight line

_____ 6. Demonstrated her ability to sew a curved-stitch pattern accurately

_____ 7. Demonstrated a pivot accurately

_____ 8. Demonstrated her ability to set the controls and stitch a zigzag line correctly

_____ 9. Demonstrated a back tack that was directly on top of first stitching

_____ 10. Observed safety rules for operation of power sewing equipment in all of the above operations.

She is hereby granted her operator's license to use the domestic/commercial machine in the CVAE lab.

Signed:

____
CVAE Teacher

BASIC SKILLS BINGO

Equipment needed:

A blank bingo card for each student.
A list of 24 words, phrases, etc. with the meaning or use of each.
Master list for the caller.
Markers--from a regular Bingo set or beans or buttons.

RULES:

1. Teacher writes the words to use on the chalkboard.
2. Instruct students to write one word or phrase from the list in any square they desire on the bingo card until all squares are used.
3. Teacher or caller reads meaning from the check card. If student knows the word for that meaning or definition, he places a marker over it.
4. Students may "Bingo" horizontally, vertically, or center diagonally as in regular Bingo. When a "Bingo" is called the player must say each word used and give the meaning or use of each. If the player fails to do so, play continues until another player "Bingos."

NOTE:

Other subjects may be used; such as Preparation Terms, Machine Parts, Clothing Construction Terms, etc.

A Master List may be made from 3 x 5 cards. Cut the cards in half and write or type one term and its meaning on each card. This way, as the caller reads, he can place it in a stack and have the check list when anyone calls "Bingo".

SAMPLE

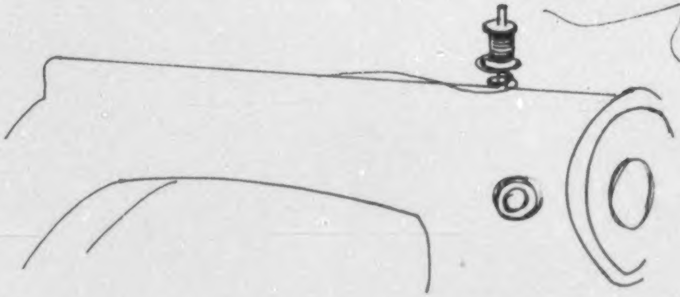
An invisible hemming stitch.

BLINDSTITCH

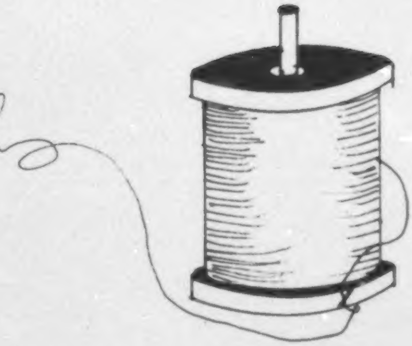
A commercial machine that finishes the edges of seams.

SERGER

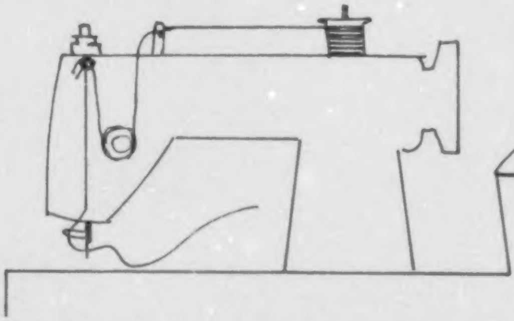
Before changing tension dial check these things:



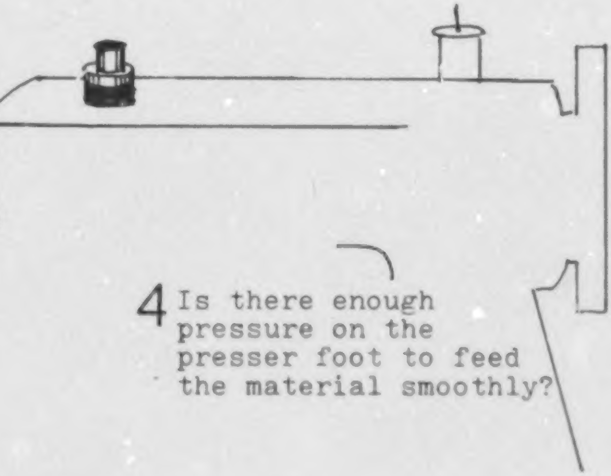
1 Has the thread slipped off the spool and wound around the spool pin?



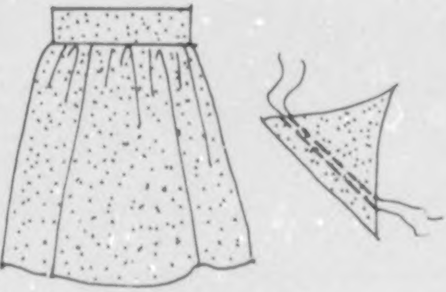
2 Has the thread caught on the notch of the thread spool?



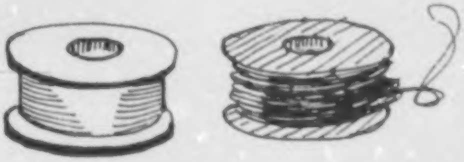
3 Is the machine threaded correctly?



4 Is there enough pressure on the presser foot to feed the material smoothly?



5 Are you making the tension check on the same material as the garment you are stitching?



6 Has the bobbin been wound properly?

BASIC COMMERCIAL MACHINE STITCHING

KEY IDEAS:

Proper and safe use of commercial sewing equipment is dependent upon skill in operating the machine.

Good posture while sewing with commercial equipment results in increased efficiency and decreased accidents and fatigue.

Trainer suggestions and employee practice contribute to improvement of job skills.

WORDS TO KNOW:

- belt
- bobbin
- bobbin case
- bobbin hook
- bobbin tension spring
- bobbin winder
- brake
- check spring
- clutch
- feed dog
- hand wheel
- head
- knee lift
- needle bar
- presser foot
- table
- thread stand
- take-up arm
- thread guides
- throat plate
- top thread tension assembly
- treadle
- back tack
- serger
- foot-operated presser-foot lifter
- loopers
- knives
- tweezers
- blindstitch
- bight
- ridge
- thread tubes
- thread nipper

Behavioral Objectives	Learning and Evaluation Experiences
Label parts of the lockstitch machine (C-K)	View a demonstration by the teacher explaining the parts of the lockstitch machine. Repeat the name of each part as the teacher names it. Match the name of each machine part to the part on a diagram of the machine. Play a game like TV's "Jeopardy" using the name and definition of the parts of the lockstitch machine. (See p. 91.) Play "Sewing Machine Rummy" to practice matching machine parts and their functions. (See p. 92-93.)

Behavioral Objectives	Learning and Evaluation Experiences
Explain the functions of parts of the lockstitch machine (C-C)	Draw the name of a commercial machine part from an envelope. Point to the part on the machine, and explain its function.
State how machine parts are disassembled (C-K)	View a demonstration by the teacher on removing the needle, bobbin, bobbin case, and other machine parts.
Attempt the basic operations of the lockstitch machine (P-GR)	Set up the machine by performing the following operations: Remove the needle; remove the bobbin and bobbin case.
	Practice until you feel at ease with the following: smooth knee-lift operation; treadle movements; turning machine on and off; listening for operating speed of the motor to be reached; pressing treadle only after peak rpms are reached, indicated by an even humming sound.
Practice inserting the machine needle correctly (P-GR)	Insert the machine needle, following diagrams and instructions in the operator's manual. Turn the hand wheel by hand, making certain the needle clears the bobbin.
Operate the lockstitch sewing machine under supervision (P-GR)	Use a piece of lined notebook paper, and stitch on the paper without thread. (The paper prevents damage to the feed dog.) Once you have set the needle on the stitching line, do not watch the needle, but practice gauging your stitch with the presser foot. Practice controlling the machine; watch your speed; operate the machine slowly.
Practice machine stitching on paper stitch patterns or cloth (P-GR)	Stitch pattern No. 1 along the lines. Practice on stitch chart No. 1 until you can follow the lines and stop the machine before reaching the end of paper.

Behavioral Objectives	Learning and Evaluation Experiences
Operate the machine with control, stopping within two stitches of the end of the line (P-M)	Practice some or all of the additional paper or cloth stitch patterns. Create different stitch patterns. Practice on the stitch patterns that include darts.
Identify the parts used for threading the lockstitch machine (C-K)	Match each part (including the bobbin) used in threading the lockstitch machine with its name from a word list.
Practice threading the lockstitch machine (P-GR)	Rethread the lockstitch machine, using original thread as a guide. Snip thread close to spool without unthreading machine. Follow original thread to rethread machine from spool.
Demonstrate threading of machine head (P-GR)	Prepare a poster-board-size threading diagram of lockstitch machine, using the operator's manual and opaque projector. Use different colors of ink to illustrate threading the machine. Work in groups of two or three to practice threading the head of the machine, as the other group members observe and evaluate.
Execute steps in threading the lockstitch machine head quickly (P-M)	Time yourself on threading the lockstitch machine; take three timings. Compare to see if your speed increases each time.
Practice speed method of changing thread (P-GR)	Snip thread as it comes off the spool; put new spool on; tie the two threads together, and pull through; clip knot, and thread needle. Time threading the lockstitch by the speed method. Compare the time required with the time for complete rethreading. Why would the speed method of threading be best on the job?
Name steps in filling the bobbin and inserting the bobbin into the machine (C-K)	View a demonstration of filling the bobbin and inserting the bobbin into the machine. (Refer to machine manual.) Name each step as the instructor demonstrates it again.

Behavioral Objectives	Learning and Evaluation Experiences
Describe the procedure used to fill and insert the bobbin (C-C)	Work in groups of two, one instructing as the other operates the machine. Practice the following safety rules while threading the bobbin: 1) Keep all loose thread ends away from the motor belt. 2) Raise the presser foot with the knee lift while filling the first bobbin. The presser foot and feed dog should be separated by fabric or paper if they touch. 3) Fill all subsequent bobbins as you sew. 4) Do not operate the machine at top speed to fill the bobbin.
Demonstrate filling and inserting the bobbin (C-Ap)	Fill and insert bobbin into the machine. Refer to operator's manual, if necessary.
Cite the need for backtacking (C-K)	Save a sample of backstitching. Observe the result of pulling the fabric perpendicular to the seamline on a seam which has not been backstitched and on a seam which has been backstitched. What happens to the seam which was not backstitched? What happens to the seam which was backstitched? From these results, why is backstitching needed?
	Note examples of correct and incorrect backtacking.
Practice until the backtack stitch falls on the original stitching line (P-GR)	Practice holding the material tight while lifting the presser foot with the knee control. Stitch, working the material back and forth. (This is necessary only if the machine doesn't have a reverse.)
State how stitch length can be changed (C-K)	View a demonstration on methods used for lengthening and shortening stitches. (Note: Is there a thumb screw or an indicator on balance wheel? Is there a release button?)

Behavioral Objectives	Learning and Evaluation Experiences
Practice seams using specified stitch lengths (P-GR)	View an exhibit showing various stitch lengths (stitches per inch) and ways they are numbered on the machine. Practice setting the machine to these numbers. (Note manual of instructions.) Practice stitching seams using varying stitch lengths.
Cite the similarities and differences between the serger and the lockstitch machines (C-K)	Sit at the serger, and find the following parts as the teacher explains each one and its function: on-off switch, treadle, foot-operated presser-foot lifter, feed dog, oil gauge, tension disc, loopers--left and right, needle, knives--upper and lower, and hand wheel. (See p. 94 for functions and comparisons of the parts.) Watch a demonstration showing the techniques in threading the serger. At what point must the tweezers be used? How is the threader used? Use a poster-sized diagram of the serger, and point on the diagram to each part that is to be threaded, and then locate that part on the actual machine.
Experiment by threading a machine needle with tweezers (P-GR)	Hold a machine needle in one hand, and practice threading it with tweezers. Fold the last 3 inches of the thread back, and twist it. The double twisted thread is easier to handle with the tweezers and should be held just behind the fold.
Try to thread the serger (P-GR)	Practice threading the serger by following the threading diagram. While working in pairs, one partner instructs as the other performs the threading operation. Check the stitch on a piece of fabric. Check tension and stitch formation. When the serger has been threaded correctly, change roles.

Behavioral Objectives	Learning and Evaluation Experiences
Operate the serger under supervision (P-GR)	Use fabric scraps to practice overcasting edges with the serger. Observe the amount of fabric the knives cut away. Observe that the finish given to the edge is not a seam; to make a seam, a line of stitching would have to be done on the lockstitch machine.
	Practice serging seam edges on the serger. Stitch pieces of fabric together on the lockstitch machine. Make scallops, circles, and straight seams. Serge the edges of the seams leaving about 3/8-inch seam allowance. If the knives are located to the right of the presser foot, let the lockstitch line of stitching lie just to the left of the presser foot.
Construct a lab project using the serger when appropriate (P-M)	Gain improvement in speed and accuracy in using the serger by serging the edges of ruffles for children's garments, lab aprons, or slack seams.
Identify hems that have been constructed on the blindstitch machine (C-K)	Observe garment hems constructed on the blindstitch machine. Note the amount of bight taken, the appearance of the stitch, and the distance between stitches.
List the steps in threading the blindstitch machine (C-K)	View a demonstration on the threading and operation of the blindstitch machine. Observe: There is only one curved-needle, one thread, and no bobbin; the thread is only slightly visible on medium- and heavy-weight fabrics; the thread is visible on sheer, light-weight fabrics; and stitches ravel out easily.
	Name orally the steps in threading the blindstitch machine, as observed in the demonstration.
Illustrate the threading of the blindstitch machine (C-C)	Depict the threading of the blindstitch machine on a diagram of the machine head.

Behavioral Objectives	Learning and Evaluation Experiences
Practice threading the blindstitch machine (P-GR)	Rethread the machine with a different color of thread using the original thread as a guide. Unthread the blindstitch machine, and rethread using a poster diagram as a guide.
Operate the blindstitch machine under supervision (P-GR)	Practice using the blindstitch machine on medium-weight fabric. Stitch in a straight hem. Observe the stitches. Are they highly visible? Are they no more than prick marks?
Manipulate the ridge adjustment, and set correct bight of needle for fabric (P-GR)	Study the handout (see p. 96) and/or operator's manual on adjusting the ridge to give a pleasing stitch. Adjust the stitches per inch, if necessary.
Point out hems made with correct bight (C-An)	Practice on different weights of fabric and different depths of hems, such as on aprons, dresses, slacks, or men's pants. Compare hems done in various bights. Which hems are least noticeable? How does the needle bight vary with different fabrics?
Identify the parts of a double-needle chainstitch machine (C-K)	Touch each machine part as the teacher names it. Note parts that you haven't seen on the other machines studied. Point to each part of the machine as the instructor calls out its name. Divide into pairs. Each team will select a partial diagram of the machine, indicating parts to be threaded. One names the machine parts as the partner checks. When the instructor calls time, teams will rotate diagrams. Continue until each team has practiced naming all the machine parts. Match names of machine parts with the actual part pictured on a diagram of the chainstitch machine.

Behavioral Objectives	Learning and Evaluation Experiences
	Begin with the thread cone for upper thread, and follow the thread with your finger from the cone to the needle. Note the direction that the thread goes through each thread guide. Repeat procedure for looper threads.
Describe threading of the double-needle chainstitch machine (C-C)	Watch as teacher demonstrates threading the double-needle chainstitch machine. Notice each step in the procedure for threading the chainstitch machine. Note: How many threads are used? Must the thread pass through all the holes in the thread straightener? Are the needles threaded from side to side or from front to back? What tool helps you feed thread through thread tubes? How many holes must the thread go through in the looper?
Practice threading the double-needle chainstitch machine (P-GR)	Clip one needle thread as it comes off the spool. Pull the clipped thread, and remove from the machine. Use the remaining needle thread as a guide, and attempt to rethread the other needle. Have your partner check your progress. Ask your teacher to check your work. When you have threaded the machine correctly, allow your partner to try.
	Clip both needle threads, and rethread both machine needles. Look at machine threading chart, if necessary. Repeat this process with the looper threads.
	Clip all four threads, and completely thread the chainstitch machine. Refer to threading chart, if necessary.
Improve speed in threading the double-needle chainstitch machine (P-M)	Take three timings on threading the chainstitch machine. Compare the times. Have you improved each time?
Cite safety measures in using the chainstitch machine (C-K)	Listen to instruction on hand placement for sewing on the chainstitch machine.

Behavioral Objectives	Learning and Evaluation Experiences
Cite method for sewing on chainstitch machine (C-K)	Observe a demonstration by teacher on proper hand placement and beginning speed to use with chainstitch machine.
Attempt machine stitching with the chainstitch machine (P-GR)	Thread the double needle chainstitch machine in preparation for sewing. Follow the procedure demonstrated, and feed two straight pieces of fabric into the machine to make a flat felled seam. Make corrections in your method as teacher instructs.
Assemble a project using the double needle chainstitch machine (P-M)	Use the chainstitch machine to sew appropriate seams on a class project. Examples: flat-felled seams in sleeves, inseams, yokes, side seams of men's pajamas or robes.
Experiment with making a single chainstitch (P-GR)	Remove the flat-felling attachment by loosening the screws. Remove one needle and one looper thread. Baste two pieces of fabric together. Discuss why the chainstitch would or would not be used to sew regular side seams. Brainstorm to think of lines of stitching that would not need to be permanent, such as in children's clothes with growth features.
Use the single-needle chain stitch in projects (P-M)	Use the single-needle chainstitch to stitch seams in various projects made in class, such as children's garments with growth features.
Determine uses for chain stitches (C-An)	Examine various ready-made garments and accessories to determine possible uses for single- and double-needle chain stitches.

GAME[1]

Card Game--Patterned from television's "Jeopardy." This may be adapted for use with any kind of unit.

MATERIALS NEEDED:

3 by 5 cards (cut in half crosswise)
fine-tipped marker

INSTRUCTIONS:

Divide the class into as many groups as necessary. Four or five per group is a good number.

Make one set of cards with one question, word, or definition per card. Assign a point value to each question, and write that amount on the front of each card. This will be the set the teacher or student moderator will use.

Make one set of cards per group with one answer per card.

TO PLAY:

Give each group a set of answers. Spread them on the table where each member of the group can see the answers. Elect a chairman of the group. The chairman will answer for the group.

The teacher can be moderator and score keeper, or one or two students can do these jobs. Two students are better. Stack the questions according to point value. Appoint a group to begin.

The group decides on the point value of the question; the chairman calls for a question of that value.

The moderator reads a question from the stack of that value.

The points go to the group whose chairman raises the correct answer card in the air first. If the answer is incorrect, the group loses the point value of the question from its score, and the second chairman whose hand was up may try for the answer.

The game continues until all questions are answered, or for a specific time.

The group with the highest score wins.

The group loses the point value if anyone except the chairman answers (although all group members may help find the answer), or if the answer is called out, rather than read from the card in the hand.

NOTE: Instead of points, use money value.

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[1] Developed by Genice Whisenhunt, CVAE Teacher, Dangerfield, Texas.

SEWING MACHINE RUMMY[1]

EQUIPMENT NEEDED:

1 deck of playing cards
(At least 46 cards--23 for the machine terms and 23 for the definitions or uses)
Pieces of white paper cut 2 by 3 inches to paste on cards
(Print as large as possible a sewing term on one card and its definition on another)
A master list of terms and definitions for checking.

RULES:

1. Two to four students may play.
2. Shuffle the cards, and deal one at a time face down until each player has six cards.
3. Place the remaining cards face down in the center of the table to form "Drawing Pile." Turn top card face upward beside drawing pile; this starts the "Discard Pile."
4. Each player tries to get rid of his cards by playing "books." A book is two cards--one with a sewing term and the other with its definition.

EXAMPLE

TREADLE	The clutch and brake on a commercial machine

5. Play is begun by player at left of dealer, who draws a card from the top of either the "drawing pile" or "discard pile," and forms, if possible, a "book" which he lays face upward before him.
6. At this point, other players may "Challenge" the match of a book. If the book is "incorrect" the player must pick up the cards and put them back into his hand.
7. At the completion of "Challenge," if any, the player then discards one card to the discard pile. He may form more than one book if he can, but may only draw and discard once.

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[1] Developed by Mrs. Frances Whitaker, CVAE Teacher, Fort Worth, Texas.

8. This order of draw, play, and discard must be followed, unless a player is unable to play or desires to hold back cards to block opponents; then he merely draws and discards as usual.
9. If all cards in the drawing pile have been used before the game is won, the discard pile may be shuffled and turned face down to form a new drawing pile.
10. A game is ended if a player clears his hand of all cards, when no cards remain in the drawing or discard pile, or when a player has a total of 50 points.

OPTIONAL PLAY: Any player may "buy" the discard by stating "I'll Buy" if the player whose turn it is does not want it. But--he must draw a card from the "Drawing Pile" plus the discard before he can get it. This will take more pairs of cards, if used.

Scoring:

+5 for player going out first

+1 for each book any player has made

+3 for challenger-if challenge is correct

-3 for challenger--if challenge is incorrect

+3 for player--if the challenger is incorrect

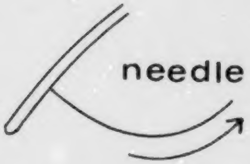
-3 for player--if challenger is correct

COMPARISON OF PARTS OF LOCKSTITCH MACHINE AND SERGER

	Serger Operation	Lockstitch
1. On-off switch	Turns on motor and light.	Same
2. Treadle	Operates clutch and brake. Pushed down with toe to engage clutch to run machine.	Same
3. Presser foot lifter	A metal floor pedal which is pressed to lift the presser foot.	Presser foot is operated by the knee-lift.
4. Feed dog	Grooved plate under presser foot that moves fabric through the machine.	Same
5. Oil gauge	A visible oil-level check.	Same
6. Tension discs	There are as many tension discs on the serger as there are threads on the machine. There is no bobbin on the serger. The bottom threads are threaded from the cones on the thread stand through the machine and to the bottom loopers. (Refer to operator's manual.)	The one top thread is threaded through to top tension assembly. The bobbin has a separate tension spring.
7. Loopers, Right and Left	The loopers on the serger take the place of the bobbin on a lockstitch machine. They resemble a needle and run from side to side rather than up and down. A looper always has an eye to carry the thread. If it does not have an eye, it is called a spreader, Acco.	The lockstitch machine does not have loopers but uses a bobbin to carry the bottom thread.
8. Needle	According to the brand of machine, the needle may be curved, straight, or slanted. Regardless of shape, it carries the thread.	Needle serves the same function, but is always straight.

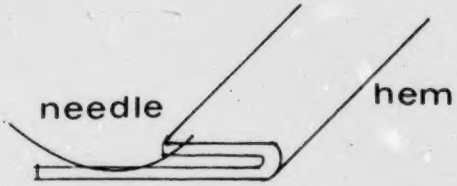
9.	Knives, lower and upper	The knives on the serger are removable, and the seam width they cut is variable. They trim the seam allowances to about 3/8-inch usually to leave a smooth even edge for overcasting. The upper and lower knives work like scissors.	The lockstitch machine has nothing to compare to the knives of the serger.
10.	Hand wheel	Used to position the needle for sewing, repairs, or threading.	Same

BLIND STITCH HEMS



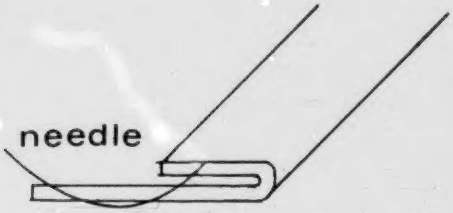
Direction of needle movement

The needle moves from side to side. It penetrates a part of the wrong side of the garment fabric and both thicknesses of the hem.



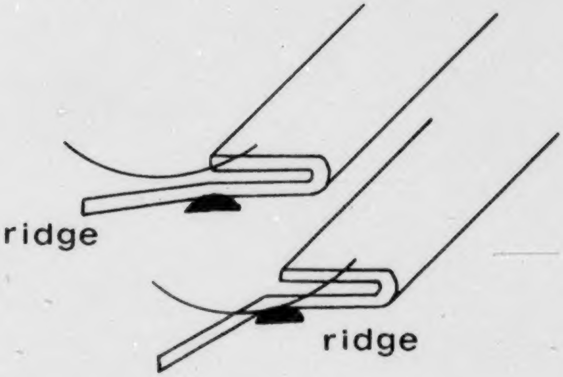
Bite in heavy fabric

The bight of the needle, the amount of fabric it picks up, is only one ply deep in garment fabric in heavy weight fabrics. The threads do not show on the right side of the garment.



Bite in light weight fabric

In sheer fabric, the needle penetrates the garment fabric. The threads show at regularly spaced intervals on the right side of the fabric.



The ridge adjustment controls the bite

The ridge adjusts to control the bight of the needle. The adjustment control is usually a dial on the head of the machine. If the ridge is too low, the needle will not catch the fabric. Therefore, the hem is not stitched. When the ridge is top high, the stitches will show on heavy fabric or will be long and very noticeable on sheer fabric when viewed from the right side.

FINISHING TECHNIQUES

KEY IDEAS:

Detailing contributes to the attractiveness of garments and can be done more uniformly and quickly by the use of machine attachments.

Decorative stitching can be obtained through the uses of cams and adjustment of stitch controls on automatic machines.

Type and use of garment may influence the use of decorative hand stitches.

WORDS TO KNOW:

hemmer
binder
ruffler
cording foot
cam
monogram
appliqué
sequins
outline stitch
satin stitch
cross stitch
blanket stitch
feather stitch
chain stitch

Behavioral Objectives	Learning and Evaluation Experiences
Identify common machine attachments (C-K)	Take an oral pre-test on common machine attachments.
	View a transparency (See p. 106.) illustrating common machine attachments. Practice identifying each one, as the teacher covers the name of each.
Identify the hemmer (C-K)	View a display of different sizes of foot hemmers. Which makes a 1/4-inch hem? Which would make the largest hem?
	Observe a demonstration of the hemmer being attached to the sewing machine and of the feeding and guiding of material through the attachment. Note the following: Are any tools needed? How is the material inserted? Are both hands used? Is the scroll filled completely? Which hand is used for guiding the material? If too little material is fed, what is the result? If too much material is fed, what is the result?
	View examples of hems made on the blindstitch machine and hems made with a hemmer. What are the main differences? When would you use each type?

Behavioral Objectives	Learning and Evaluation Experiences
Practice using the hemmer (P-GR)	Remove the regular foot from machine, and place hemmer on machine.
Practice using the hemmer (P-GR)	Practice using the hemmer on straight pieces of cloth. Use a variety of fabrics. Note the differences in handling among various fabrics. Practice until an acceptable swatch is completed using the hemmer.
Complete a hem using the foot hemmer (P-M)	Hem small projects, such as ruffles, aprons, or triangle head scarves, using the hemmer.
Examine the binder attachment (C-K)	Examine the binder attachment. Why are there several slots in the scroll?
	Observe a demonstration on attaching and using the binder. Note the following: Why is the bias cut at a slant? After the binding is slipped through the slot how far must it be drawn? Where do you insert the edge to be bound? Where should the stitches be?
	View examples of binding finishes. Where may binding finishes be used? Are they always a necessary edge finish, or are they used as a decorative touch at times?
Practice attaching the binder to machine (P-GR)	Work in pairs to practice attaching the binder. Check your partner for errors.
Practice attaching the binder and sewing on binding (P-GR)	Practice attaching binding to scraps. Attach some to a straight edge and some to inner and outer curved edges.
Determine whether the binding has been sewn in correct manner (C-An)	Examine the bindings you attached. How can one tell when the binding has been sewn correctly?
Construct a project using the binder on some portion (P-M)	Complete a project, such as a baby bib, apron, or hoisery bag, using the binder.

Behavioral Objectives	Learning and Evaluation Experiences
Identify the ruffler attachment (C-K)	Examine the ruffler attachment. View examples of gathering that have been done by hand and gathering made by the ruffler attachment. What differences do you observe? Observe a demonstration on attaching the ruffler to the machine. How is the tension changed? How is the fullness of the ruffle adjusted?
Practice using the ruffler (P-GR)	Attach the ruffler to the machine. Place a scrap of fabric in the correct position in the ruffler. Practice ruffling long strips of fabric until you feel confident you can handle fabric as it goes through the ruffler.
Operate the ruffler in an assembly line (P-M)	Produce an assembly-line project, such as aprons, children's garments, or smocks, using the ruffler. Use the ruffler to make trim for a child's garment.
Identify the cording foot (C-K)	Examine the cording foot. On the domestic machine, is it also called a zipper foot? View a demonstration on use of the cording foot. How is the cording foot attached? Where is the cording placed? How close to the cording should one stitch?
Follow the teacher's example for covering the cording (P-GR)	Set up machine with cording attachment. Ask teacher to check your work. Practice in teams of two; one will stitch the cording; the other will check to see that the cord remains free.

Behavioral Objectives	Learning and Evaluation Experiences
Depict possible uses of cording (C-C)	Make a bulletin board or poster showing the various uses of cording in both clothing construction and home furnishings. Include buttonholes, frogs, buttonloops, corded seams, sofa and chair cushions.
	Discover additional uses of cording. Bring pictures or examples to class for discussion showing uses for cording.
Construct a project using covered cording (P-M)	Cover cording, and use in a project such as handbag or garment bag.
Identify machine attachments (C-K)	Play the "Grab Bag" game. Place all the attachments studied in a bag or box. As an attachment is drawn from the bag, match it to a fabric sample on which the attachment was used. In the next round, match the attachment to the proper name card.
Cite procedures for using lab machines for making buttonholes (C-K)	Watch teacher demonstrate the making of machine buttonholes. (Note: Refer to the operator's manual for the machine.) If different types of domestic machines are available in the CVAE laboratory, note differences in the way machine buttonholes are made on various machines.
	View a demonstration on setting up the machine to make machine buttonholes. What tools are needed? What stitch length is used? How is the stitch width set?
	View a demonstration on the procedure for marking buttonholes on garment; determine buttonhole length and mark buttonholes. Where do you start the buttonhole? How many times is the buttonhole retraced?
Practice making buttonholes of various sizes (P-GR)	Divide in pairs. While one student calls out the steps, the other one practices setting up the machine for making buttonholes.

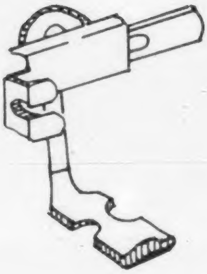
Behavioral Objectives	Learning and Evaluation Experiences
	Reach in grab bag and take out a button; determine the size of buttonhole needed; set up machine, and make the buttonhole; cut the buttonhole; sew the button on a scrap; button with buttonhole that was constructed.
Construct buttonholes on an actual project (P-M)	Make buttonholes, and use buttons as fasteners on projects such as "How To" books for small children, lab coats, "emergency smocks" for students who must repair or launder their clothes at school.
Identify decorative machine stitches (C-K)	View a display or bulletin board showing examples of decorative machine stitching such as borders, applique, monograms.
	Familiarize yourself with decorative stitches which may be obtained by the use of cams or by adjusting controls of the machine.
Experiment with making several decorative stitches (P-GR)	Draw from a box or other container, a slip of paper illustrating a decorative stitch. Set up the machine to make this stitch.
	Practice feeding the fabric while the machine is set for a decorative stitch. Use a variety of fabrics, and practice as many stitches as time allows.
Determine decorative stitches appropriate for use on specific projects (C-An)	Construct a pair of pillowcases, or serge the edges of a cup towel, and add a decorative stitch for a border. Make an apron or smock, and add a decorative stitch for trim.
Identify procedures for making the decorative monogram stitch (C-K)	View a demonstration of monograming by a machine company demonstrator.
Practice monograming (P-GR)	Set the machine dials for a monogram stitch; make proper adjustments.

Behavioral Objectives	Learning and Evaluation Experiences
	Practice making your initials on fabric swatches. Try to make smooth turns.
Produce an acceptable monogram (P-M)	Make simple monograms on hand towels, pillowcases, gym shorts, or shirts.
Cite procedures for making hand appliqué (C-K)	Observe a demonstration of hand appliqué using lace and other motifs. Note: Is the appliqué cut to exact size? Why is a line of stitching made around the design? Why is a seam allowance turned under on the stitching line? What hand stitches can be used for attaching the appliqué?
Follow techniques for hand appliqué on practice swatches (P-GR)	Thread the machine with thread the color of the appliqué design. Practice doing, a machine-stitch outline on the appliqué. Fold under seam allowance and position appliqué on garment. Attach with slip stitch or small blanket stitch.
Cite techniques for machine appliqué (C-K)	Observe a demonstration of machine appliqué. Note: How much seam allowance is needed? What is placed between the appliqué and garment? Are the edges turned under? What type of stitch is used? How are the edges trimmed?
Identify topstitching (C-K)	Study a display of garments which have been topstitched. Observe a demonstration on topstitching. Note the following: What type of thread is used? How many stitches are there per inch? Is topstitching usually done during or after garment construction? What areas are hard to stitch?
Practice topstitching (P-GR)	Select thread for use in topstitching Set stitch length.

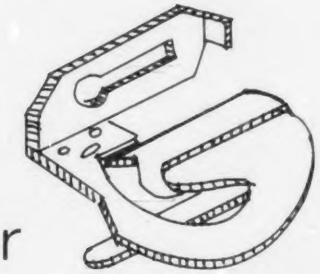
Behavioral Objectives	Learning and Evaluation Experiences
	Prepare a patch pocket. Topstitch the pocket to a garment. Were you able to keep the stitch an even width from the fold. Did you pivot at the corners?
Improve ability to topstitch (P-M)	Apply topstitching technique in class projects such as locker caddies, lab smocks, or flaps of handbags.
Practice machine appliqué (P-GR)	Experiment using techniques given in the demonstration, remembering to use slow speed and manipulate fabric as you sew. Trim appliqué fabric, then interfacing fabric. Keep work flat.
Cite techniques for iron-on appliqué (C-K)	Watch as the instructor demonstrates how to trim and cut iron-on fabric and apply it to another fabric. Make a list of steps that are taken and compare lists with a master list after demonstration. Note: Is a seam allowance necessary? Is a dry or steam iron used?
Practice iron-on appliqué (P-GR)	Select an iron-on design or trace a design on iron-on fabric.
	Test an iron-on appliqué following instructions on the package.
Explain differences between hand and machine appliqué (C-C)	View pictures and samples of hand and machine appliqué. Which is sturdier? Which is more dressy? Which would look better on sportswear, and which on a wedding or evening dress?
Describe situations for using hand or machine appliqué (C-C)	Pass around pictures of garments, with fabric swatches attached. Would hand or machine appliqué be more suitable in each instance? Consider the following questions: What type of fabric is used? Is the garment or article to be worn or used often? Is the garment considered dresswear or sportswear? Would you want the stitches to show?

Behavioral Objectives	Learning and Evaluation Experiences
Produce an attractive appliqué on a project (P-GR)	Use appliqué on a project constructed in class, such as a cloth shoulder bag, shirt, or tote bag.
Identify the equipment needed for decorative hand stitches (C-K)	Use the list of names of equipment prepared by the teacher to identify pieces of equipment on the table. Why is each needed for doing decorative hand stitches?
Identify basic hand and decorative hand stitches (C-K)	Use flash cards with diagrams of hand stitches and decorative stitches. State the name of the stitch, and indicate if it is a basic or decorative stitch. Examples of basic hand stitches include: slip stitch, running stitch, blindstitch. Examples of decorative stitches include: satin stitch, feather or briar stitch, cross-stitch. Examples of both include buttonhole stitch, blanket stitch, and catch stitch.
Describe the various decorative hand stitches (C-C)	Study steps in making the various decorative hand stitches. (See p. 67.)
	Illustrate various decorative hand stitches on transparencies using the overhead projector. Illustrations may also be drawn on the board.
	Select from a box the name of a decorative hand stitch. Draw a picture of the stitch and explain the steps in making the stitch.
Practice making decorative stitches (P-GR)	Practice making decorative hand stitches on a decorative sampler.
	Use a decorative hand stitch to complete a project in class. Examples: Use saddle stitching to trim a handbag; use cross stitch for making initials on a scarf; use decorative stitches to make a design on a cup towel or scarf.

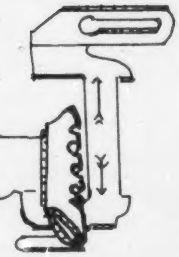
Behavioral Objectives	Learning and Evaluation Experiences
Name uses of sequins and beads as a finishing technique (C-K)	Observe a display of evening wear featuring beaded and sequined motifs. Discuss occasions for wearing garments decorated with beads and sequins.
List techniques for applying sequins and beads (C-K)	Observe a demonstration of single sequin application and of outline sequin application.
Try techniques for applying sequins and beads (P-GR)	Place on fabric the design to be beaded. Get out equipment needed for project.
	Practice application of sequins and beads to various swatches of fabric.
Practice beading on a small project (P-M)	Construct a small project such as an evening bag, glasses case, or money pouch. Trim with beads or sequins.



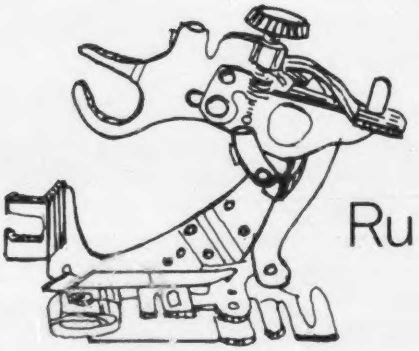
Cording Foot



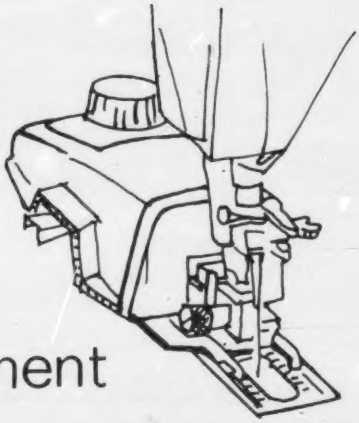
Hemmer



Binder



Ruffler



Buttonhole Attachment

CONCEPT: Custom Clothing Construction

JUSTIFICATION:

Many job opportunities are available for those who acquire basic skills in custom clothing construction. The training and knowledge provided through a study of custom clothing construction may be a valuable asset to the CVAE student in the job market. Knowledge of basic sewing skills may aid the student in learning to operate power sewing equipment. A basic foundation in clothing construction provides the student with knowledge and skills which can be applied to assembly-line construction.

OVERALL OBJECTIVES:

Construct a simple garment (P-M)

Analyze characteristics of high quality construction and poor quality construction (C-An)

Choose construction techniques that lend themselves to quality garments (A-V)

Display attitudes which encourage success as a custom dressmaker (A-V)

BASIC INFORMATION - TEXTILES

KEY IDEAS:

Each fiber has characteristics which determine the properties of fabrics made from them.

The properties of each fabric determine appropriate construction and pressing techniques.

Use of construction techniques suited to the fabric is essential to yield a garment of professional appearance.

Fabrics of natural fibers are usually easier to work with than fabrics of man-made fibers or special fabrics.

Nylon, polyester, acrylic and acetate are heat-sensitive fibers.

Knowledge of construction and pressing techniques for special fabrics is essential for a custom dressmaker.

Some fabrics require special handling to retain their beauty.

WORDS TO KNOW:

textile
fiber
fabric
natural fibers
cotton
linen
silk
wool
man-made fibers
rayon
acetate
triacetate
nylon
acrylic
polyester
special fabrics
sheers
knits
laces
velvet
velveteen
corduroy
laminates
vinyls
fake furs
stretch fabrics
metallic fabrics
pile

Behavioral Objectives	Learning and Evaluation Experiences
Identify natural, man-made, and special fabrics (C-K)	View a filmstrip on natural and man-made fibers. Note the name and characteristics of each fiber. Examine labeled fabric samples of natural and man-made fibers. Note the feel and appearance of each fabric. Examine samples of special fabrics such as sheers, knits, laces, velvet, velveteen, velour, corduroy, laminates, vinyl, fake furs, stretch fabrics and metallics. Note the feel and appearance of each fabric.

Behavioral Objectives	Learning and Evaluation Experiences
	View a bulletin board or "feel" board displaying labeled samples of special fabrics. Feel each sample and note differences among the fabrics.
Identify characteristics of natural, man-made, and special fabrics (C-K)	Use the checklists for natural, man-made, and special fabrics to note special characteristics of fabrics. Checklists may be completed as activities are done throughout textile study. (See p. 112-114.)
Give examples of natural, man-made, and special fabrics (C-C)	Work in teams to select examples of natural, man-made, and special fabrics from stacks of fabric samples. The team which categorizes the most samples correctly in the shortest length of time wins.
Test various pressing temperatures on natural, man-made, and special fabrics (P-GR)	Work with fabric samples from each fiber family. Place the iron on a low setting, and gradually increase the temperature. Which fabrics react to the heat first? Which fabrics require the lowest setting? Which fabrics require the highest setting? Which fabrics cannot be pressed at all? What happens when fabrics are contacted by an iron which is too hot?
	Test skill in determining proper pressing temperature for various fabrics. Test numbered fabric samples for pressing temperature and techniques. Record results.
Experiment with different pressing methods on natural, man-made, and special fabric samples (P-GR)	Test results of the following methods of pressing on several fabric samples: press with and without moisture; press on right side and on wrong side; press with and without press cloth; press until dry or leave slightly moist. Which fabrics appear to need moisture during pressing? Which fabrics look best when pressed without moisture? Which fabrics look slick and shiny when pressed on the right side without a

Behavioral Objectives	Learning and Evaluation Experiences
	press cloth? Which fabrics show imprints on the right side when seams are pressed? How can imprinting be prevented? How can the dressmaker test fabric brought by a customer? Why should fabric be tested for correct temperature before pressing?
	Try pressing pile fabrics with and without a needle board. What happens when the needle board is not used? What can be used if a needle board is not available? Why should pile fabrics be pressed on a needle board?
Test various types of thread on samples of natural, man-made, and special fabrics (P-GR)	Stitch fabric samples, using mercerized cotton, silk, polyester, and nylon thread. Remove stitches. Are marks left in some fabrics when threads are removed? How does this tendency affect construction of a garment with this fabric? Which thread is most appropriate for each fabric?
Identify construction processes necessary for special fabrics (C-K)	View a filmstrip on garment construction using special fabrics. List special instructions which apply to each fabric, as pointed out in the filmstrip.
Give examples of construction processes necessary for special fabrics (C-C)	Reach in a grab bag filled with samples of special fabrics. Pull a sample out, and describe the special construction processes necessary with that fabric.
Experiment with construction processes on special fabrics (P-GR)	Stitch seams in fabric samples. Try various needle sizes, tension settings, and stitch lengths. Which of each is best for each sample? What factors affect the needle size, tension, and stitch length needed for each fabric?

Behavioral Objectives	Learning and Evaluation Experiences
	Place a pin in a fabric sample. Remove the pin and note results. Did the pin leave a noticeable hole or other mark where it was inserted? How will retaining holes or marks affect the construction process?
Designate natural, man-made, and special fabrics as easy, average, or difficult to work with (C-An)	Use experiences with various fabrics in previous class activities as a basis for categorizing fabrics as easy, average, or difficult to work with.
Outline guidelines for working with natural, man-made, and special fabrics (C-An)	Work in groups to outline guidelines for construction processes with natural, man-made, and special fabrics. Use the checklist for natural, man-made, and special fabrics as a reference. One group should work with each checklist to establish guidelines.
	Test skill in determining proper techniques for working with natural, man-made, and special fabrics, by experimenting with fabric samples. Do all necessary tasks to complete checklist provided by teacher for each fabric sample.

CHECKLIST FOR NATURAL FIBERS

Directions: Check the space which applies to each of the natural fibers

	Cotton	Linen	Wool	Silk
Pressing Temperature				
Hot				
Warm				
Cool				
Pressing Method				
Moist heat				
Dry heat				
Leave moist				
Press dry				
Press on right side				
Press on wrong side only				
Use press cloth				
Pinning				
Pin marks show				
Pin marks do not show				
Type of Thread				
Cotton Mercerized				
Polyester				
Silk				

CHECKLIST FOR MAN-MADE FIBERS

Directions: Check the appropriate columns under each fiber

	Rayon	Acetate	Triacetate	Nylon	Acrylic or Modacrylic	Polyester
Pressing Temperatures hot						
warm						
cool						
Pressing Method moist heat						
dry heat						
press on right side						
press on wrong side						
use press cloth						
little pressing required						
Pinning pin marks show						
pin marks do not show						
Stitching stitches show when removed						
sheer fabrics stitched through tissue paper						
Thread Type cotton, mercerized						
silk						
nylon						
polyester						
Presser Foot light pressure						
heavy pressure						

CHECKLISTS FOR SPECIAL FABRICS

Pressing Temperature	Sheers	Knits	Laces	Velvet	Velveteen	Corduroy	Laminates	Vinyl	Fake Fur	Stretch Knits	Metallics
hot											
warm											
cool											
varies with fiber content											
special instructions											
Pressing Method											
moist heat											
dry heat											
press on right side											
press on wrong side											
use press cloth											
use needle cloth											
little pressing required											
do not press											
follow special instructions											
Pinning											
pin marks show											
pin marks do not show											
Stitching											
stitches show when removed											
stitch through tissue paper											
follow special instructions											
Thread											
cotton, mercerized											
silk											
polyester											
nylon											
Presser Foot											
light pressure											
heavy pressure											

CHECKLISTS FOR TEXTILE EVALUATION

DIRECTIONS: Place a check mark under the number of the fabric sample(s) to which handling characteristics listed in left-hand column apply.

	Sample 1	Sample 2	Sample 3
Pressing Temperature			
hot			
warm			
cool			
Pressing Method			
moist heat			
dry heat			
press dry			
leave slightly moist			
press on right side only			
press on wrong side only			
use press cloth			
use needle board			
requires little pressing			
do not press			
Pinning			
pin marks show			
pin marks do not show			
Stitching			
stitches show when removed			
stitch through tissue paper			
Thread			
cotton, mercerized			
silk			
polyester			
nylon			
Presser Foot			
light pressure			
heavy pressure			

BASIC INFORMATION--LINE AND COLOR IN DESIGN

KEY IDEAS: The appearance of the individual is affected by line and color.

Line and color can be manipulated to enhance good features and modify figure faults of an individual.

Line and color can be incorporated as part of the design.

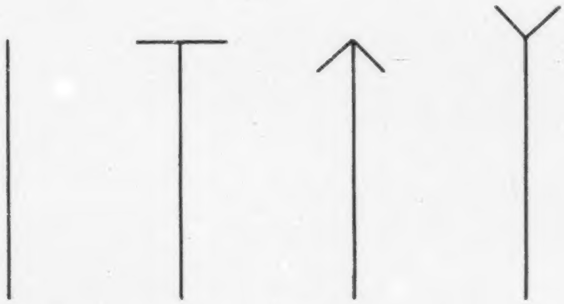
WORDS TO KNOW:
design
vertical
horizontal
color
line
curved
diagonal

Behavioral Objectives	Learning and Evaluation Experiences
Identify use of line and color in design (C-K)	Study handouts on line and color in design. (See p. 118.) Draw vertical, horizontal, curved, and diagonal lines. View transparencies on line and color in clothes. Discuss the effects of each on basic figure types and complexions.
Explain how line and color can create an optical illusion (C-C)	Work in small groups to examine magazine pictures. Describe the effects of line and color on the persons in the illustrations. Do they appear taller, shorter, heavier, or more slender than they would wearing other designs? How do the colors affect their skin tones?
Apply the principles of line and color to select a pattern and fabric for a specific individual (C-Ap)	Clip a magazine picture of a garment that shows a design suitable in line and color for a specific individual. Justify your selection.
Name methods of incorporating line and color into garment design (C-K)	Look at garments or pictures of garments chich show how line can be incorporated into a design by use of contrasting fabrics. Note placement of contrasting fabrics. Which pattern pieces are made of contrasting fabric? What effect does use of contrasting fabric have on the appearance of the individual?

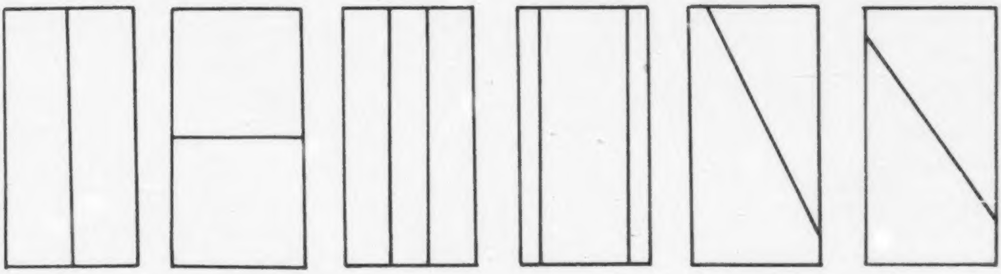
Behavioral Objectives	Learning and Evaluation Experiences
Give examples of ways line and color can be used in garment design (C-C)	Look in magazines and other available resources to locate pictures which illustrate use of contrasting fabrics in garment design. Explain how line and color are used in determining placement of contrasting fabric.
Show how line can be incorporated into garment design (C-Ap)	Work in groups to examine garments or pictures of garments accompanied by a description of a problem such as too little fabric brought by customer, garment too small for customer, or pattern purchased when customer was a different size. Solve the problem described by incorporating line and color into the garment design. Solutions for problems may include use of contrasting garment pieces such as collar, cuffs, or pockets; use of contrasting panel in garment, contrasting waist inset, contrasting fabric for corresponding garment pieces.
Use knowledge to incorporate line and color into garment design for a specific individual (C-Ap)	Read a description of a custom construction situation, in which figure type, garment description, a description of a specific fitting problem are given. Solve the problem by incorporating a contrasting fabric into the design. If a panel is needed, what size panel would be most pleasing for the figure type? What color would be most enhancing to individual's features? Use actual garments and fabric, and, using contrasting fabric, insert panels, waist insets, or other design features into garments. Display garments for other class members for additional ideas. Solve a design problem for a specific individual and garment by incorporating into the design of the garment, lines suitable for the individual. Use an actual garment and contrasting fabric, to style garment to needs and problems outlined in a short description of the person the garment belongs to.

LINE AND COLOR

Look at these lines. Do they look the same length? No, but they are. Measure them to be sure.



Now look at the rectangles. There seems to be a change in size, although each shape is the same.



If you will remember these things when looking at design lines of patterns, you can decide how a customer will look in the finished garment. Remember, any line made by a construction detail will influence the way a customer looks in the garment.

Lines in clothes can fool other people by making one's good points more noticeable. The most important lines in clothes are in the outline or silhouette. The outline of a person is seen first. Details are only seen at close range.

KINDS OF LINES

1. Vertical-----a. Lines that run up and down
   b. Make a person look taller and slimmer

2. Horizontal---a. Lines that run in the same direction as the ground
   b. Make a person look shorter and heavier

3. Diagonal-----a. Lines that slant
   b. Make a person look taller and slimmer
   c. The more vertical the diagonal lines are, the smaller the person will look
   d. If diagonal lines are almost horizontal, they make the person look wider

4. Curved-------a. Lines that are like part of a circle
   b. Make the figure look soft and graceful
   c. Make figure faults more noticeable if the lines follow the figure

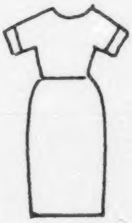
5. Vee----------a. Lines that come together forming a V
   b. Make a figure look slimmer. If spread far apart, the lines may make a person look wider

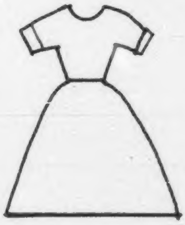
6. Broken-------a. Lines running into one another
   b. Shorten long, straight lines

EFFECT OF LINES

1. A small panel makes an area appear narrower.
2. A wide panel makes an area appear wider.
3. Vertical lines make an area appear narrower.
4. Horizontal lines make an area appear wider.

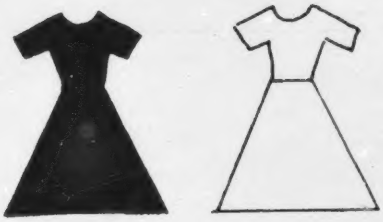
SLIM VERSUS FULL





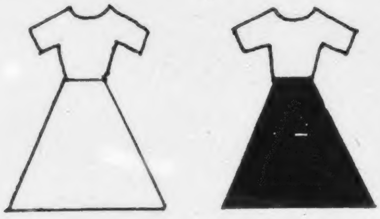
Slim outlines make a person look taller and slimmer. Full-skirted garments make a person look shorter and heavier.

DARK VERSUS LIGHT



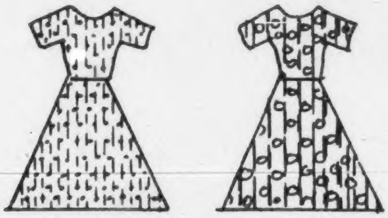
Dark colors make the figure look smaller. Light colors make the figure look larger. In addition, dull colors (and matte fabrics) make the figure seem smaller; bright colors (and shiny fabrics) tend to make it look larger.

SOLID COLORS VERSUS CONTRASTING COLORS



A solid color makes a person appear taller. A dress or separates with the bodice in one color, the skirt in another, make the figure appear shorter.

SMALL PRINTS VERSUS LARGE PRINTS



The size of a print should be in proportion to the size of the wearer. Small prints should be chosen for small figures (they would be dwarfed in a large print) and large prints should be chosen for large figures (small prints would simply draw attention to their size).

When choosing prints, also remember that vertical designs tend to add height, while horizontal designs add width and make one look shorter.

BASIC INFORMATION--BODY MEASUREMENTS

KEY IDEAS:

A pattern of the correct size and figure type will minimize alterations and adjustments.

Custom fit begins with accurate measurements.

Needed alterations are determined by comparing pattern measurements with the customer's measurements.

WORDS TO KNOW:

measure
tape measure
bust
waist
hip
chest
ruler
figure type
inch
shoulder
length
width

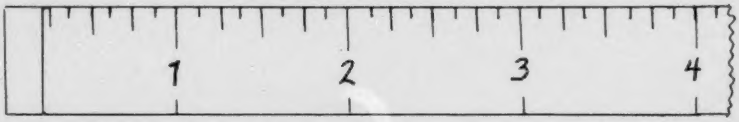
Behavioral Objectives	Learning and Evluation Experiences
Identify basic measuring equipment (C-K)	Examine measuring equipment. Discuss sewing uses for each. Find the 1-inch marks, 1/2-inch marks, 1/4-inch marks, 1/8-inch marks.
Interpret line markings on rulers and/or tape measures (C-C)	Practice reading and using a tape measure. (See p. 123.)
Identify basic body measurements (C-K)	View transparencies illustrating the correct methods for taking basic body measurements. (See p. 126.) List general rules for taking body measurements.
Illustrate correct placement of tape for taking basic body measurements (C-C)	Draw lines to indicate correct placement of the tape measure for taking basic body measurements.
Demonstrate ability to take body measurements (C-Ap)	Work with a partner to practice taking body measurements needed to purchase correct pattern size or for determining needed alterations. (See p. 128.) Use the pattern size charts to select the pattern size needed by partner, according to his measurements. Note measurements which are not the same as those on the pattern. (See p. 128.)

Behavioral Objectives	Learning and Evaluation Experiences
	Take body measurements of a customer, and record for use in constructing a garment. Note measurements which are not the same as the pattern.
Identify basic figure types (C-K)	View a bulletin board or transparency illustrating basic figure types. What differences are noticeable? List other differences cited by the teacher.
	Look at the descriptions of figure types in a pattern book. Match each figure type in the pattern book with one of the figure types discussed by the teacher.
Describe the characteristics of basic figure types (C-C)	Work in groups to describe the characteristics of each basic figure type. Draw a slip of paper with a figure type written on it. Use resources available to describe the basic characteristics of that figure type.
	Look at a magazine picture and a short description of the figure characteristics of the person in the picture. What figure type does the person in the picture illustrate?
Illustrate basic figure types (C-C)	Look in magazines or other books to locate illustrations of basic figure types. Display illustrations on a bulletin board. Write a short description of the figure type illustrated.
Apply knowledge of figure types to a specific person (C-Ap)	Take a customer's body measurements, and determine her figure type.
	Test your ability to take accurate body measurements. Measure a classmate as if she were a customer. Record her measurements; determine her figure type; and select a pattern suitable for her.

MEASURING

Learning to measure properly is very important in clothing construction. The first piece of measuring equipment to be used is a tape measure.

Look at the drawing below of part of a tape measure. The tape measure is divided into inches.



From the end of the tape measure to the number "1" is 1 inch.

Now, look at a tape measure. How many inches do you see on the tape measure?

Answer___________

Look at the drawing again. You will see lines between the numbers. Each inch is divided into 8 parts by the lines.

Count the spaces on the drawing from the end to the number "1."

How many spaces did you count?

Answer___________

Each space is 1/8-inch.

Look at a tape measure. What is the length of the smallest of the spaces between each line on a tape measure?

Answer___________

It takes 2 spaces to make 1/4-inch.
1/8 + 1/8 = 2/8 or 1/4.
We say 1/4-inch instead of 2/8-inch.

How many 1/4 inches make 1 inch?

Answer___________

It takes 4 spaces to make 1/2-inch.
1/8 + 1/8 + 1/8 + 1/8 = 4/8 or 1/2.
We say 1/2-inch instead of 4/8-inch.
How many 1/2 inches make 1 inch?

Answer___________

It takes 6 spaces to make 3/4-inch.
1/8 + 1/8 + 1/8 + 1/8 + 1/8 + 1/8 = 6/8 or 3/4.
We say 3/4-inch instead of 6/8-inch.
After measuring 3/4-inch how much space is left in 1 inch?

Answer___________

If we wanted to measure 1 1/2-inch, how many 1/8-inch would you use?

Answer___________

Beginning at the dot (.), draw a line for the following measurements. You may use a ruler, since it is marked the same way as a tape measure:

5/8-inch .

3 1/2-inch .

1 1/2-inch .

2 1/8-inch .

1/2-inch .

1 7/8-inch .

1 3/4-inch .

3 1/4-inch .

Look at the inch on a tape measure again. Name each part from left to right. Remember that you do not say 2/8-inch, 4/8-inch or 6/8-inch.

Answer___________

____

____

____

____

____

____

____

Measure the following lines. Place the correct length of each line in the answer space to the right of each line.

Answers:

____________ ________________

___ ______________________________ ________________

____ ________________

____ ________________

____ ________________

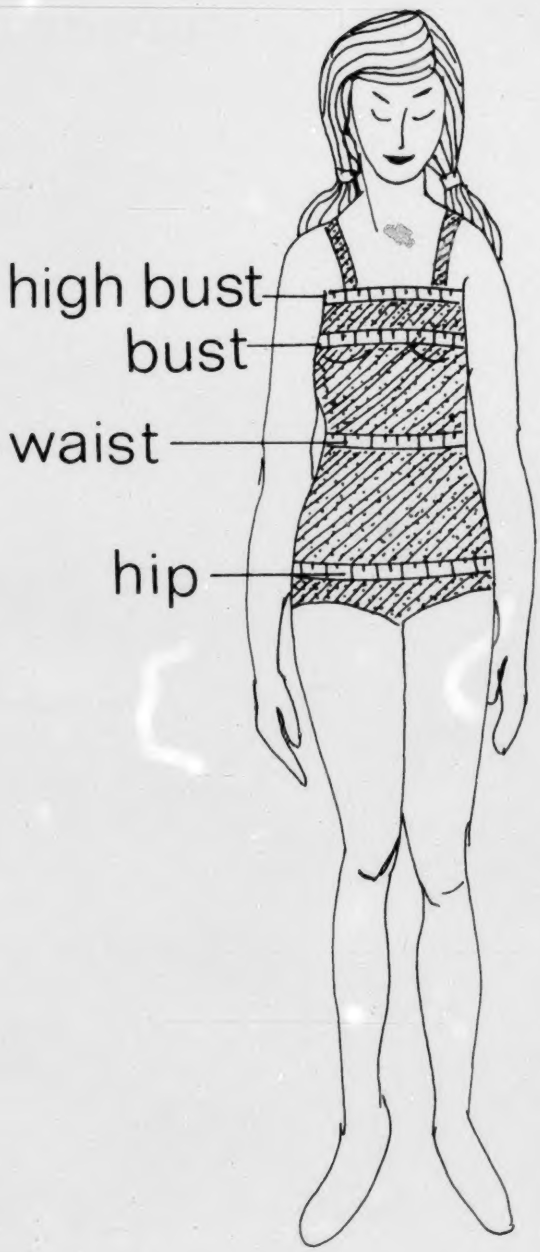
____________________________ ________________

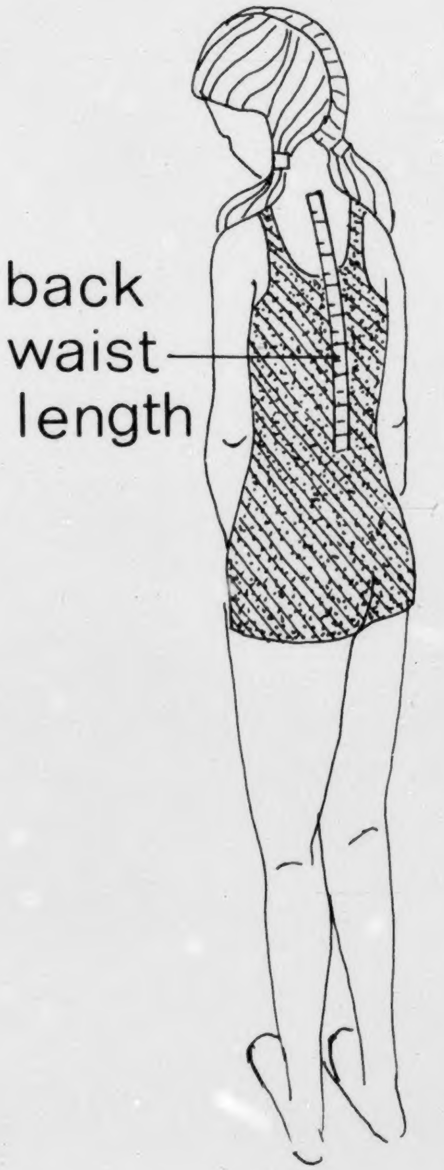
Using a tape measure, measure each of the items listed below:

The length of the cutting table. Answer__________

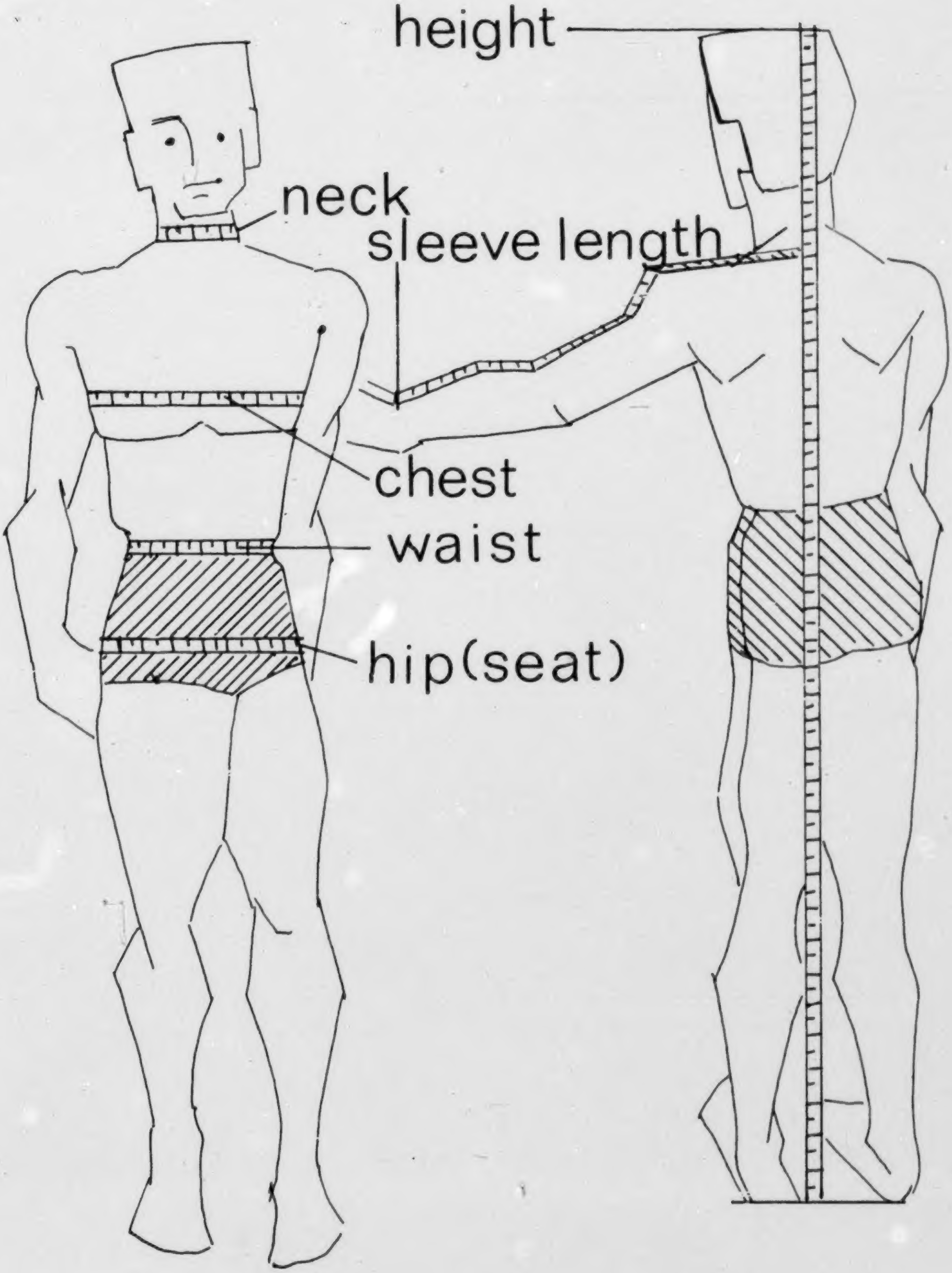
The width of the cutting table. Answer__________

TAKING BODY MEASUREMENTS
GIRLS AND WOMEN


high bust
bust
waist
hip


back
waist
length

TAKING BODY MEASUREMENTS BOYS AND MEN


height
neck
sleeve length
chest
waist
hip(seat)

MEASUREMENT CHART

	Individual Measurements	Pattern Measurements	Alterations Needed
Essential Measurements Bust			
Waist			
Hips			
Back neck to waist			
Front neck to waist			
Arm length			
Skirt length			
Measurements for Problem Areas Chest			
Back width			
Diaphragm			
High Hip			
Bust point			
Shoulder			
Arm circumference			
Neck circumference			

BASIC INFORMATION--COMMERCIAL PATTERNS

KEY IDEAS:

Pattern information aids the dressmaker in checking whether the customer has brought the necessary fabric and notions for a garment.

Patterns provide useful information regarding the construction of a garment.

Carefully following instructions on the pattern envelope and the pattern guide contributes to construction of a quality garment.

WORDS TO KNOW:

- pattern
- pattern envelope
- pattern guide
- pattern pieces
- view
- yardage
- layout
- alteration
- clip and slash
- gathering
- straight of grain
- notch
- cutting line
- seam or stitching line
- dart
- dot
- pleats
- directional arrow
- buttonhole
- hem
- fold
- seam allowance
- tuck

Behavioral Objectives	Learning and Evaluation Experiences
Identify the parts of a pattern (C-K)	View the parts of a pattern, such as the pattern envelope, pattern guide, and pattern pieces. Find these parts in a pattern provided by the teacher.
Name the information on pattern envelope needed by the dressmaker (C-K)	Find the information given on a pattern envelope which the dressmaker can use to check whether the customer has provided the necessary fabric and notions. Where is the information located? Why is this information important to the dressmaker? How can the dressmaker be sure the customer has purchased the correct size pattern?
Explain how the information given on the pattern instruction guide will aid the dressmaker (C-C)	Find information given on the pattern instruction guide which will aid in using the pattern. Explain the importance of each piece of information given.

Behavioral Objectives	Learning and Evaluation Experiences
	Role play the following situation: Customer brings pattern, fabric, and notions for a garment. The dressmaker asks questions and checks to obtain information she needs, including customer's measurements, pattern size, alterations needed, view desired, amount of fabric needed, amount of fabric brought by customer, appropriateness of fabric for pattern, notions needed, notions brought by customer, and any special instructions. Different problems may be introduced as role play is repeted. Examples: wrong size pattern purchased, not enough fabric provided, not all notions provided, fabric too stiff for soft drape of pattern, lining or interfacing fabric not purchased. Obtain needed information from an actual customer when she brings pattern, fabric, and notions.
Identify the symbols on pattern pieces (C-K)	Locate the pattern pieces needed for construction of a specific view of a garment. Look at pattern pieces to note markings on the various pieces. Find words that are used for identification. Describe the line used for alteration, and explain the directions given on the line, such as "lengthen or shorten." Find the markings and words on the pattern that are used when laying the pattern on fabric for cutting. Locate and explain markings and words used during the construction of the garment. Play a card game to practice identifying the symbols used on pattern pieces. (See p. 132.)
Interpret the symbols on pattern pieces (C-C)	Locate marking symbols on the pattern pieces, and explain the use of each. What does it mean? How is this symbol helpful to the dressmaker?

Behavioral Objectives	Learning and Evaluation Experiences
	Take a test on pattern markings. Look at a pattern with various parts circled or numbered. Explain how the dressmaker uses each part of the pattern.

Sewing Terms Games

Solitare

A. 1. Separate cards into two stacks, one stack of picture cards and one stack of word cards.
   2. Place picture cards face up on the table. Shuffle word cards.
   3. Turn up one word card at a time and match it with the correct picture card.
   4. Check answers with the answer sheet provided by the teacher.
   5. Score 1 point for each correct match. Play again and try to beat your last score.

B. Vary the above directions by using only one category of cards, such as pattern symbols or sewing equipment.

C. 1. Shuffle picture cards.
   2. Place category cards (pattern symbols, equipment, etc.) face up on the table.
   3. Turn picture cards face up, one at a time.
   4. Place the picture card under the appropriate category card until all cards are placed under a category.
   5. Check answers with answer sheet.

C. 1. Shuffle all cards.
   2. Turn cards up one at a time.
   3. Group picture and word cards according to category (equipment, pattern markings, etc.) and place matching picture and word cards in pairs under each category.
   4. Continue until all cards are face up and matched.
   5. Check with answer sheet. Score 1 point for each correctly matched pair and 1 point for each pair placed under the correct category. No points are given for incorrectly matched pairs even if cards are in the correct category.

Group Game (2-4 players)

A. 1. Shuffle all cards.
   2. Place half the cards face down in the center of the table.
   3. Deal the other of the cards to players.
   4. The object of the game is to get rid of cards by matching them into pairs of picture and word cards.
   5. A player may lay down one pair at his turn.
   6. He must draw a card from the deck in the center of the table at each turn and discard one card at each turn.
   7. Continue the game until one player has laid all his cards down in pairs.
   8. The player who lays all cards down first wins. If time is called before any player lays all cards down, the player who has laid down the most pairs wins.

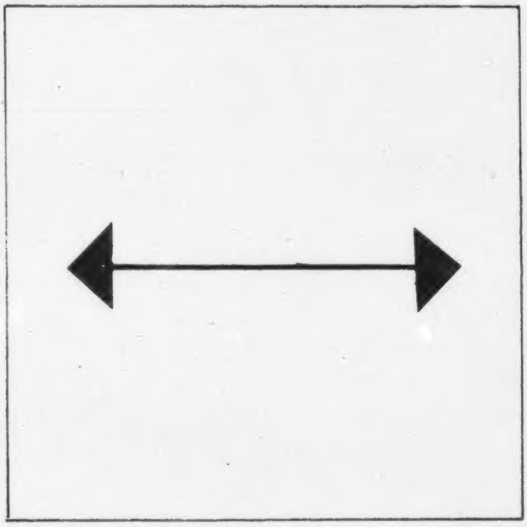
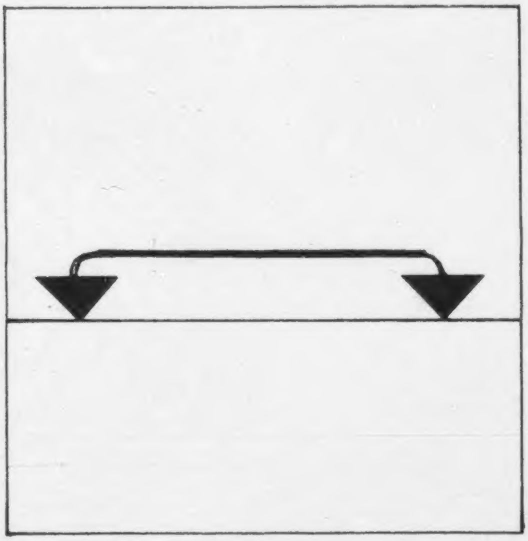
To Make Cards:

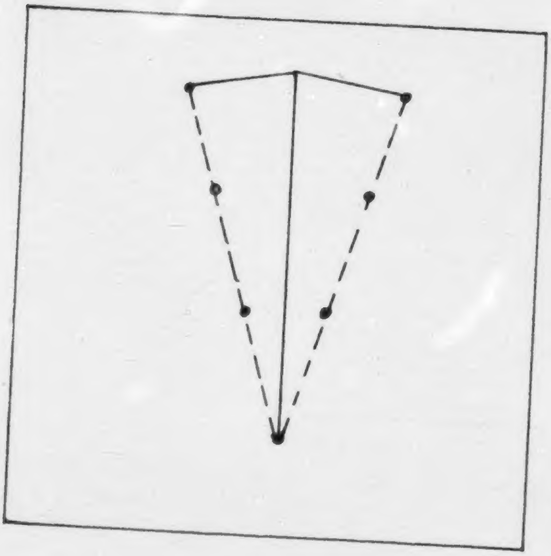
Run off copies of picture and word cards. Cut apart, and use as they are, or paste on heavy construction paper or cardboard which has been cut into card-size pieces.

To Make Answer Sheet:

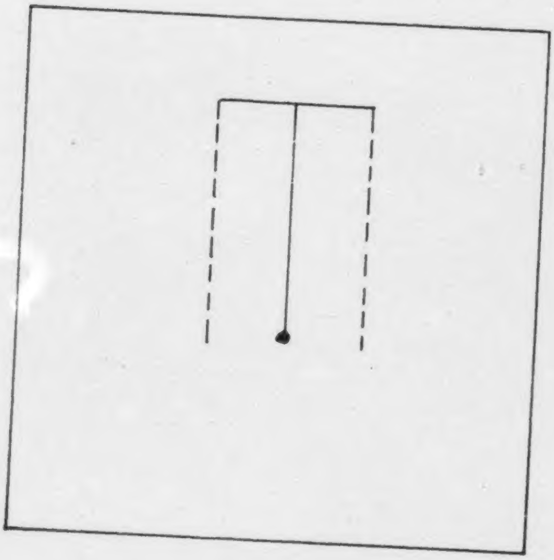
Run off copies of the picture and word cards with corresponding words and pictures side by side, or paste corresponding picture and word cards together on a sheet of paper to serve as the answer sheet. Cards should be grouped into categories (sewing equipment or pattern markings) on the answer sheet, and categories should be labeled. This sheet should be available to students to check pairs and categories when playing the card games.

PATTERN SYMBOLS

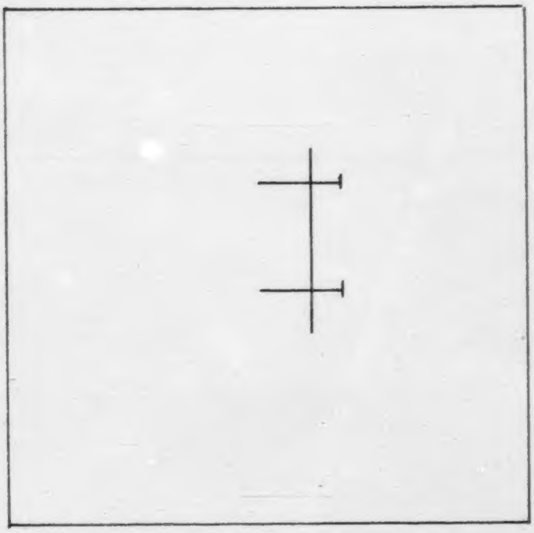
Symbol Cards	Word Cards
	Straight of Grain of Fabric
	Place on Fold of Fabric



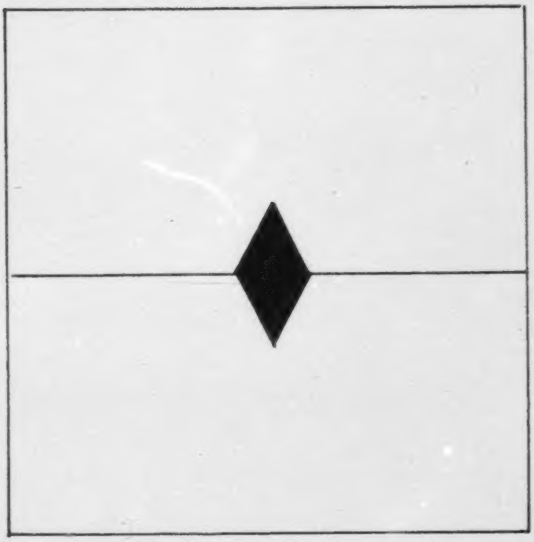
Dart



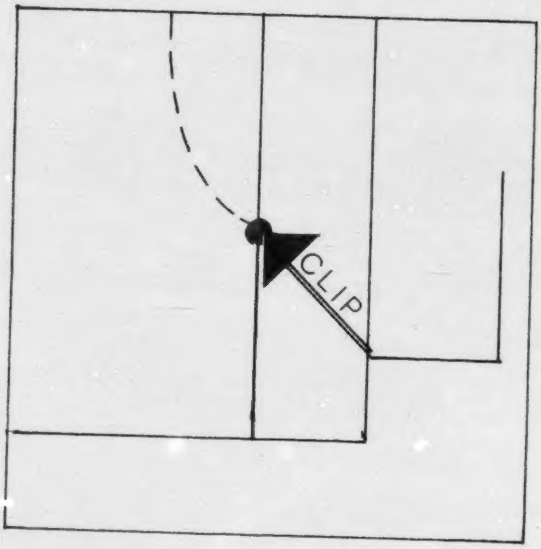
Tuck



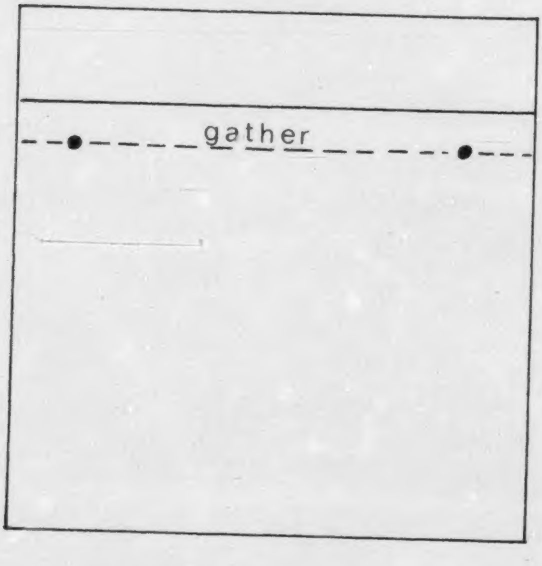
Buttonholes



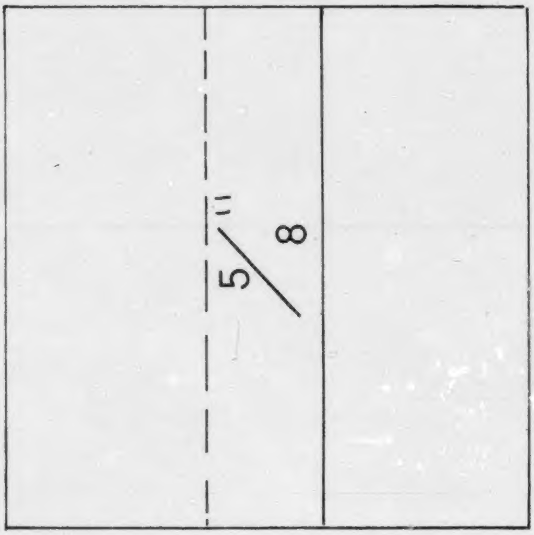
Notch



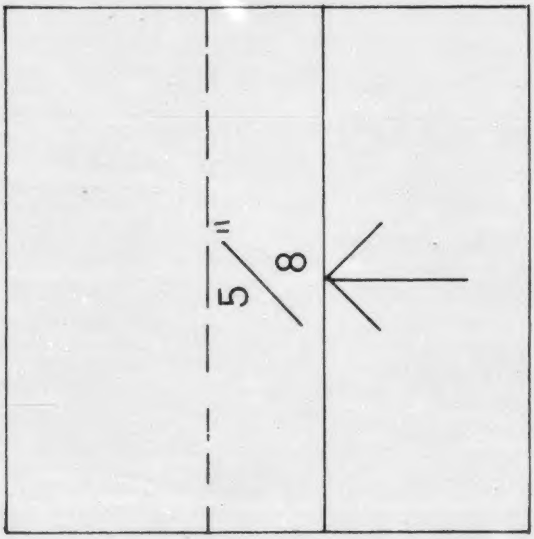
Clip seam allowance along arrow to dot



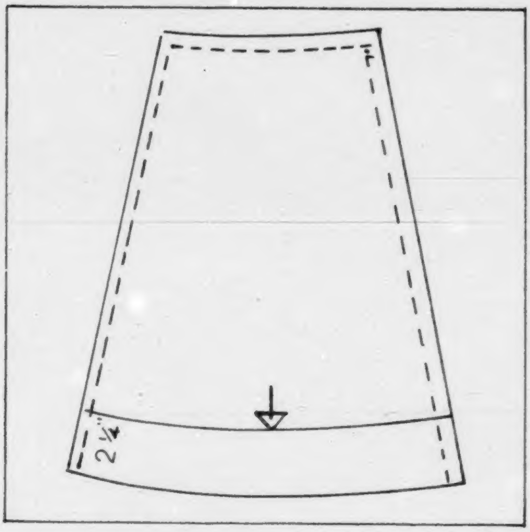
Gathering Line



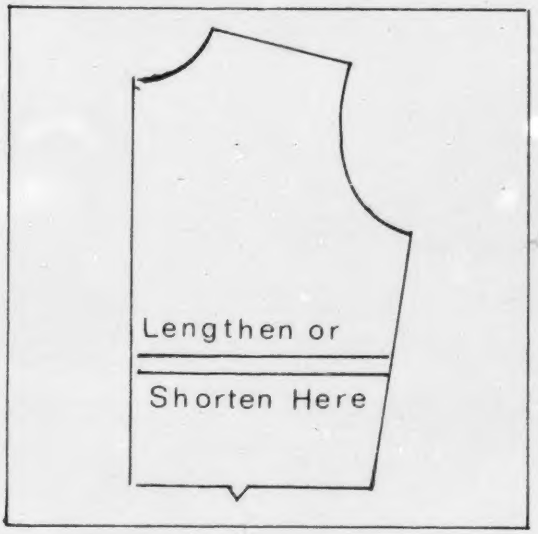
Seam Allowance



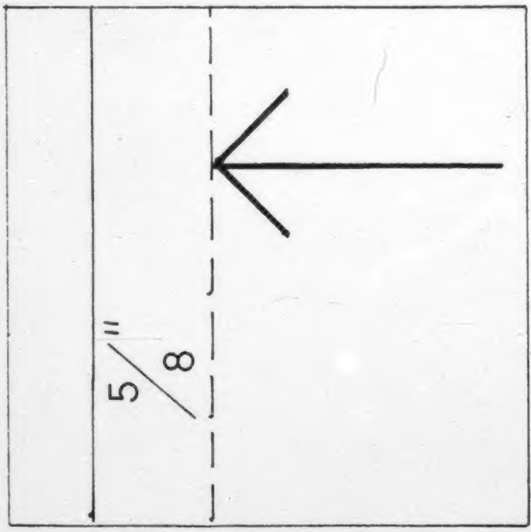
Cutting Line



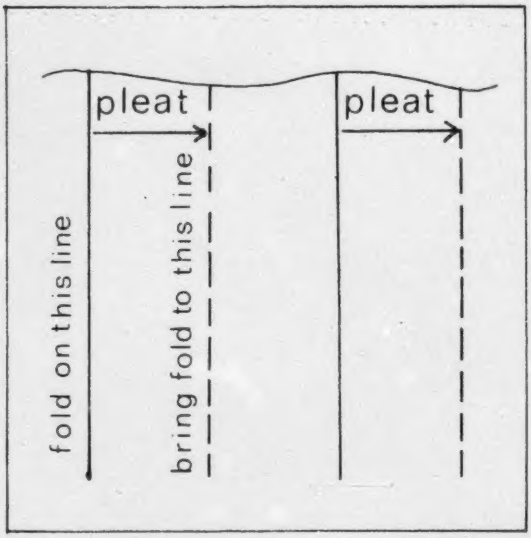
Hem Line


Lengthen or
Shorten Here

Alteration Line



Seam Line

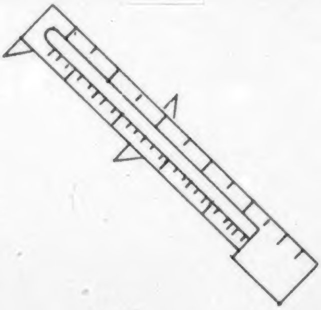

pleat
pleat
fold on this line
bring fold to this line

Pleat Line

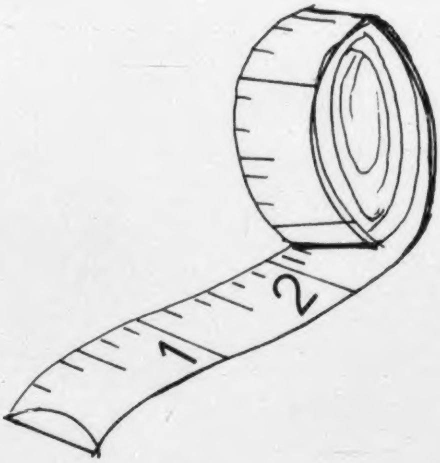
SMALL SEWING EQUIPMENT

Symbol Cards

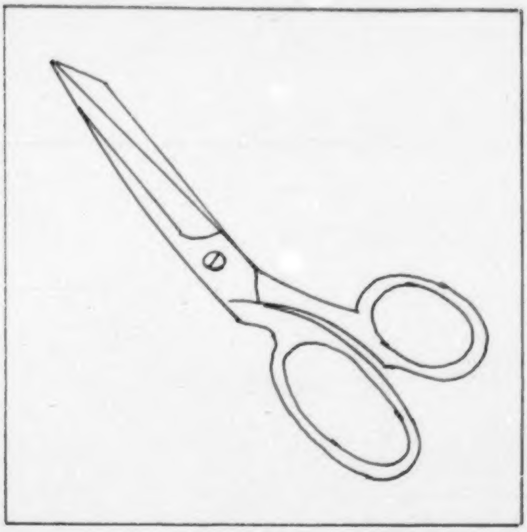
Word Cards



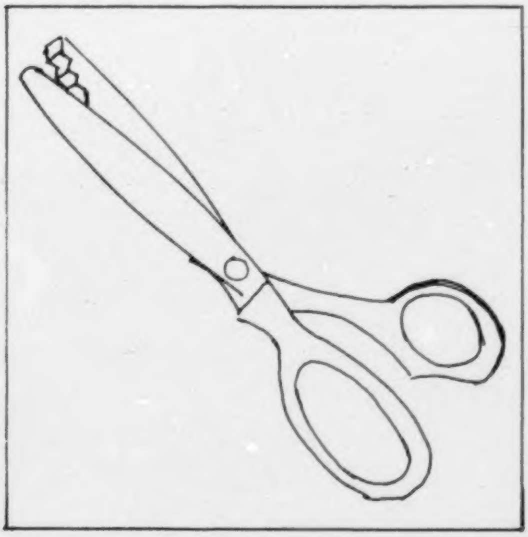
Sewing Gauge



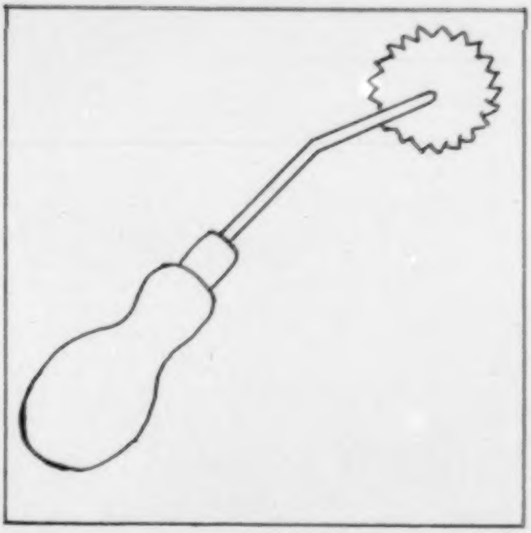
Tape Measure



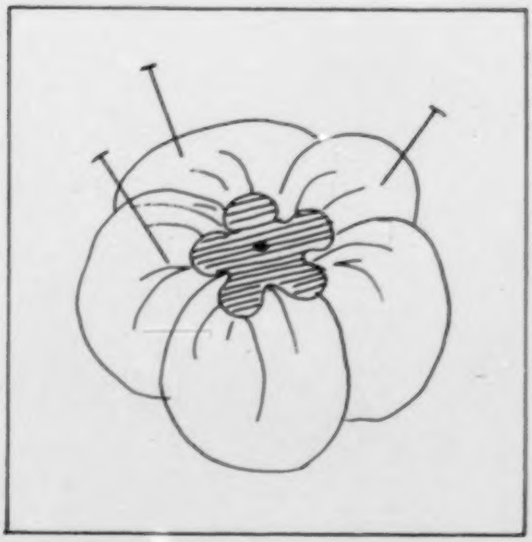
Cutting Shears



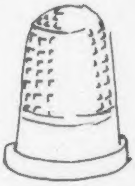
Pinking Shears



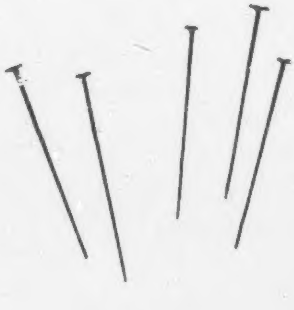
Tracing Wheel



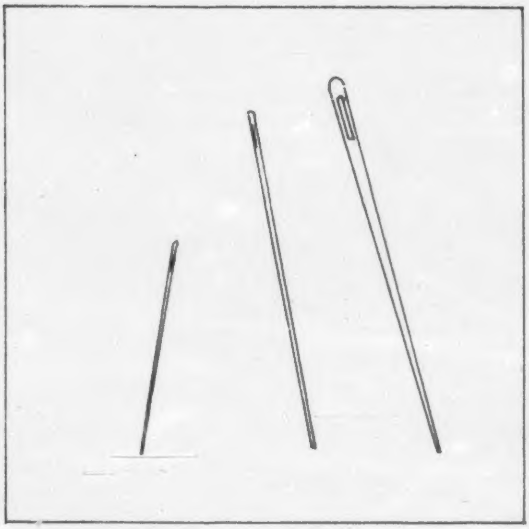
Pin and Needle Cushion



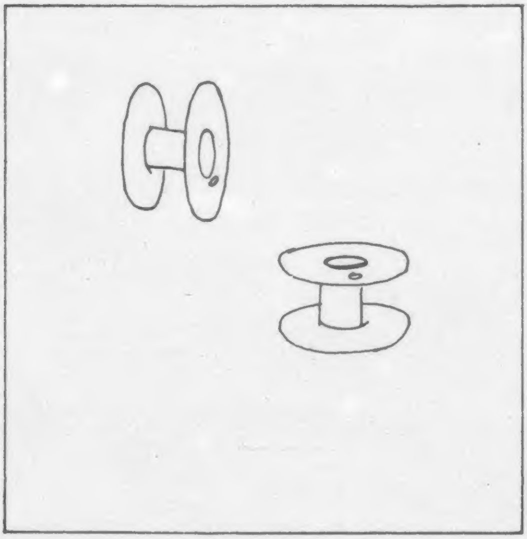
Thimble



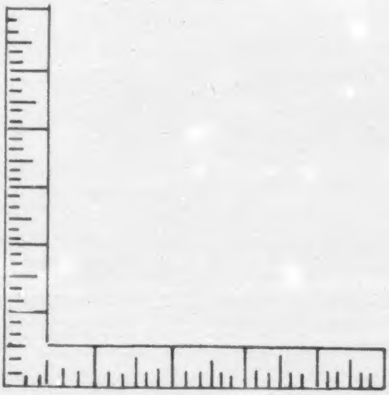
Pins



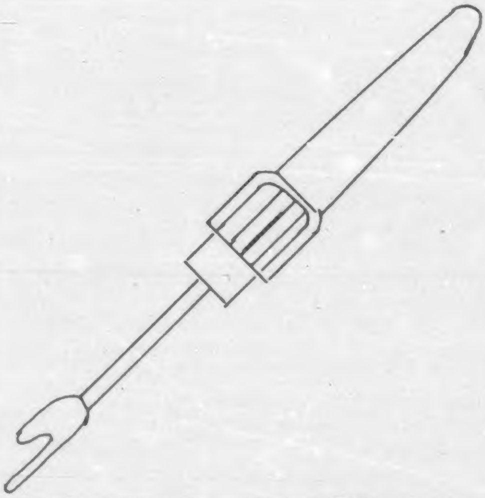
Needles



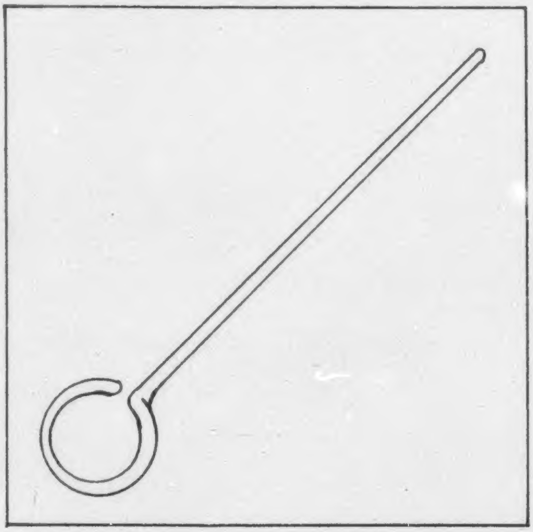
Bobbin



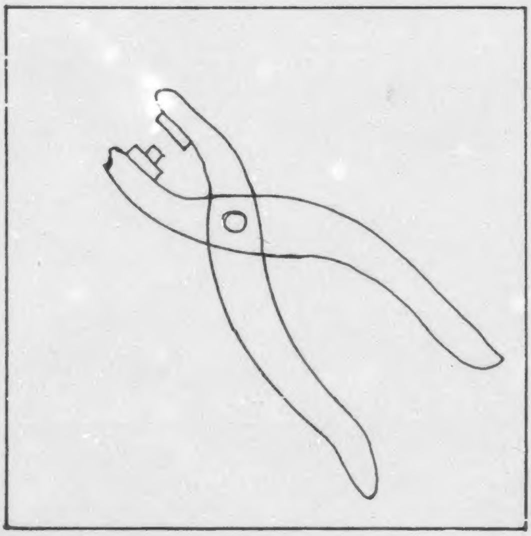
Tailor's Square



Seam Ripper



Loop Turner



Belt Eyelet Punch

GARMENT CONSTRUCTION--MANAGEMENT IN CONSTRUCTION

KEY IDEAS:

Convenient organization of the work area results in more economical use of time and energy.

A well-organized work area simplifies the construction process.

The work area includes all supplies and equipment needed for the construction process, arranged in a convenient manner.

A saving of time and energy results in greater profit.

Schedules must allow time for a satisfactory standard of work.

Schedules must include all activities of the dressmaker.

Accurate estimation of time for making a garment increases customer satisfaction.

Garment construction may be simplified by organizing it into units.

Unit construction can save the dressmaker time and energy in constructing a garment.

WORDS TO KNOW:

fitting area
storage area
cutting area
unit construction
unit
bodice unit
collar unit
pressing area
cutting board
standard of work
skirt unit
front unit
back unit
facing unit
pressing equipment
management
dovetail
schedule
sleeve unit

Behavioral Objectives	Learning and Evaluation Experiences
List ways to improve management in construction (C-K)	Begin a list of hints to improve management in construction. (See p. 154.)
Identify characteristics of a well-arranged sewing area (C-K)	View illustrations or filmstrips depicting well-arranged sewing facilities. List characteristics of a well-arranged sewing area.

Behavioral Objectives	Learning and Evaluation Experiences
	Take a field trip to an alteration room or a custom dressmaking room. Note organization of facilities such as the fitting area, pressing area, construction area, and storage area for customer's garments, fabrics, notions, equipment, and supplies. Where is the ironing board in relation to the seamstress? How are sewing supplies and equipment arranged? Where are storage areas located? How are storage areas organized? How are fabrics, notions, supplies, and equipment stored?
	List the essentials for a well-arranged sewing area. Include the following: good lighting; chair of appropriate height and depth which gives adequate support to the back; full length mirror; cutting surface which is appropriate height and accessible from at least three sides; ironing board and iron located conveniently for use during construction; adequate storage space in a convenient location; and adequate electrical outlets in accessible locations.
Give examples of well-organized sewing areas (C-C)	Locate pictures of well-organized sewing areas. Use available magazine or textbook pictures. Explain the characteristics which make the area well-organized.
	Use floor plans of sewing areas, or set up mock sewing areas in the classroom, both well-arranged and poorly-arranged, to do time and motion studies on construction tasks. Compare time and motion required to do the same task at each sewing center. How does arrangement of the area affect the time and motion required for tasks? Why is it desirable to minimize time and energy required?

Behavioral Objectives	Learning and Evaluation Experiences
Prepare a well-organized sewing area (C-Ap)	Set up a well-organized sewing area for a dressmaker. Use equipment and facilities which are available in the classroom.
	Listen to a panel discussion, taped interviews, or taped panel discussion by dressmakers. Suggested questions include: 1) What activities are included in your schedule? 2) How do you estimate time for each activity in the schedule? 3) How do you estimate the time needed to make a garment? 4) What factors do you consider when estimating the time needed to complete a garment? 5) If in doubt, is it better to underestimate or overestimate time needed? Why? 6) What could cause a change in time needed after construction of garment is begun? 7) How is speed related to standard of work? Which is more important in dressmaking? 8) Why can't one standard schedule be used by all dressmakers? 9) What form of schedule do you use? 10) What steps do you follow in making a schedule? 11) What factors do you consider when planning a schedule? 12) How do you dovetail dressmaking activities and homemaking activities?
Identify considerations in estimating time for constructing a garment (C-K)	List things which will affect the amount of time it takes to make a garment. Include difficulty of pattern; special details, handwork, or design features; special handling of fabric; number of pattern pieces; designs which must be matched; dressmaker's skills.
Describe factors which affect the time needed to complete a specific garment (C-C)	Read a description of a garment, fabric, and dressmaker's skills. Work in groups to give examples of the factors she must consider in estimating time needed to construct the garment.

Behavioral Objectives	Learning and Evaluation Experiences
Predict the time needed to make a specific garment (C-Ap)	Read a case study, and estimate the amount of time it will take the dressmaker to complete the garment described.
Determine time needed to complete a specific garment (C-An)	Role play situations in which the dressmaker estimates the time it will take to complete a specific garment. What factors are involved which will affect the amount of time needed? Did she estimate an adequate amount of time? How much time would you estimate to make the garment?
Identify factors to consider when planning a schedule (C-K)	Look at samples of dressmakers' schedules. What activities are included in the schedule? How is the schedule organized? How are homemaking activities dovetailed with dressmaking activities?
	List factors a dressmaker must consider when planning a schedule. Include estimated time to complete garment, fitting times, homemaking activities, other activities or appointments, and free time for family or for personal relaxation and hobbies.
Prepare a schedule for a dressmaker (C-Ap)	Read a case study describing a dressmaker's situation. Set up a schedule which will enable the dressmaker to complete garments on time and carry out her other activities as well.
	Work in groups to prepare a schedule for a specific situation. What factors did you consider when making the schedule? How did you dovetail activities?
Analyze a schedule for a specific situation (C-An)	Examine a schedule and a description of the situation for which it was prepared. Was enough time allowed for all activities? Were activities dovetailed when possible? What changes would you make in the schedule?

Behavioral Objectives	Learning and Evaluation Experiences
Plan a schedule for a specific situation (C-S)	Evaluate your ability to manage dressmaking activities by developing a schedule for a specific situation. Listen to a taped description, or read a case study of a specific dressmaker's activities. Make a schedule for the dressmaker, using good management yet allowing enough time for all activities.
Define unit construction (C-K)	Listen as the teacher describes unit construction. Write a definition of unit construction in your own words.
Recognize units of construction (C-K)	View a display showing the units in which a specific garment is constructed. Identify the units. Example: skirt front, skirt back, bodice front, bodice back, collar unit, sleeve unit. What is a unit? How are units used in constructing garments?
	View a transparency showing pattern pieces for a specific garment grouped into construction units. What will be done to each unit before it is joined to another unit?
Explain how unit construction saves time and energy (C-C)	Brainstorm to describe ways unit construction saves the dressmaker time and energy. Include such points as avoiding excessive wrinkles and stretching, preventing a shopworn appearance, aiding in knowing what has been short periods of time for sewing, and giving a feeling of accomplishment.
Demonstrate ability to place pattern pieces in units (C-Ap)	Select pattern pieces needed for one view of pattern provided by your teacher. Divide the pieces into units of construction. In what order will the units be joined? Ask your teacher to check your work.

Behavioral Objectives	Learning and Evaluation Experiences
Utilize unit construction in making a garment (C-Ap)	Use unit construction in making a simple garment for a customer. How did use of unit construction save time and energy? Explain. Test your ability to use unit construction by arranging names of pattern pieces into units. Slips of paper with names of pattern pieces written on them will be provided. Arrange them into units; then arrange the units in the order in which they will be joined.

DRESSMAKING MANAGEMENT

Keep a list of current supplies. Keep thread and seam tape in a range of colors, a variety of fasteners, and white and black interfacing. This will sometimes prevent a shopping trip if a customer fails to bring all necessary items.

Tape or thumbtack a paper bag to the side of sewing machine table to catch scraps and threads.

Wrap a bias strip of cloth around the neck of the machine with padding in front to serve as a convenient pin cushion.

Store equipment or supplies near the point of first use.

Store spools of thread one layer deep with similar colors together.

If a special cutting board must be set up, do as much cutting as possible while the assembly is in place.

Be sure work surfaces are the appropriate height for comfort during work.

Stitch as much as possible at one sitting.

Utilize chain stitching. Sew from one seam to the next or from one dart to the next without cutting threads. Cut and tie threads after stitching several pieces.

Press as much as possible at one time. Lay pieces aside to press until several are ready.

Be sure electrical outlets are adequate and accessible to work area.

GARMENT CONSTRUCTION--FABRIC PREPARATION

KEY IDEAS: Proper fabric preparation is necessary for a garment to fit and hang correctly.

Application of the appropriate method of fabric preparation results in grain-perfect fabric.

Grain perfection is essential for a quality garment.

Proper fabric preparation will prevent problems during construction which result from an off-grain fabric.

WORDS TO KNOW:
grain perfect
crosswise grain
lengthwise grain
bias
off-grain
selvage
tear
pull
preshrink
fold

Behavioral Objectives	Learning and Evaluation Experiences
Identify the parts of fabric (C-K)	View a bulletin board showing lengthwise and crosswise grain, selvages, bias, and fold. Fringe the edges of small fabric samples by pulling the crosswise and lengthwise threads. Identify the crosswise and lengthwise threads in the sample. Find the lengthwise and crosswise threads and selvage edges on samples of fabrics. Place a sheer fabric with prominent grain lines on the overhead projector. Locate the grain lines on the fabric.
Identify grain-perfect and off-grain fabrics (C-K)	View samples of fabric which are on-grain and off-grain. Cite differences between on-grain and off-grain.
Illustrate fabrics which are on-grain and off-grain (C-C)	Use samples of fabrics to identify and explain on-grain and off-grain fabrics.

Behavioral Objectives	Learning and Evaluation Experiences
Identify methods of fabric preparation (C-K)	View filmstrips, film loops, or transparencies on fabric preparation. The following should be included: straightening ends, tearing or straightening edges, preshrinking, straightening grain, pressing to remove wrinkles and center fold line.
	Observe a demonstration on fabric preparation.
Describe the methods used to prepare fabric for construction (C-C)	Examine samples of fabric to determine whether each is grain perfect. Discuss appropriate ways to straighten fabric if it is not grain perfect.
Try various methods of fabric preparation (P-GR)	Practice various methods of fabric preparation using fabric samples.
Use appropriate fabric preparation methods on specific fabrics (P-M)	Use the correct method of preparation on fabrics to be used in garment construction.
Analyze problems encountered when fabric design is printed off-grain (C-An)	Study fabric samples with designs printed on the fabric after it was woven. Which samples have designs which are printed on-grain? Off-grain? If the design was printed off-grain, what problems may be encountered in cutting out the garment?
	Test your skill in fabric preparation. Look at a fabric folded with one end and selvage edges together. Identify the parts of the fabric which are labeled with numbers. Is the fabric on-grain? If not, how would you straighten it?

GARMENT CONSTRUCTION--PATTERN USE

KEY IDEAS:

Pattern alteration helps give the garment a custom fit.

The most perfectly constructed garment will fail to complement the wearer if it does not fit well.

Correct grainline of garment pieces is dependent upon proper pattern placement.

Matched designs in a garment are an indication of quality construction.

Careful placement of pattern pieces may result in more economical use of fabric.

The customer has several alternatives if too little fabric was purchased.

Cutting out a pattern accurately contributes to a well made garment with properly matched pieces.

Directional cutting preserves the grain of fabric pieces.

Correct placement of construction and design details is dependent upon correctly marked garment pieces.

Transfer of all necessary markings from the pattern to the fabric simplifies the construction process.

WORDS TO KNOW:

alteration
lengthen
shorten
crotch
layout
diagram
economical
parallel
perpendicular
right side of fabric
wrong side of fabric
crosswise fold
lengthwise fold
design
nap
cutting
directional cutting
even strokes
markings
transfer
pockets
ease
fold lines
center front
notches
center back
armhole
top of sleeve
darts
dot
tailor's chalk
tracing paper or dressmaker's carbon
tracing wheel
tailor's tacks

Behavioral Objectives	Learning and Evaluation Experiences
Relate standard body measurements to individual body measurements (C-Ap)	Compare body measurements of a specific individual with standard body measurements to see where pattern alterations are needed. (See p. 128.)
Identify methods of altering patterns for specific figure irregularities (C-K)	View illustrations on wall charts, transparencies, or bulletin boards of alteration procedures for patterns. State procedures for adding to or subtracting from pattern size.
Illustrate how pattern alterations can be made for an individual (C-C)	Use discarded patterns to explain pattern alterations needed for various figure irregularities as each alteration is demonstrated.
Practice altering patterns to fit individual measurements (P-GR)	Alter a pattern to fit a particular individual's body measurements. Ask your teacher to check your work.
Determine where to alter a pattern for a specific figure problem (C-An)	Divide into small groups. Analyze the figure problem involved in a specific illustration, and determine the alterations needed to solve the problem. Test your ability to alter patterns. Study a pattern and an explanation of the fitting problem. Diagnose the problem, and alter the necessary pattern pieces to solve the fitting problem.
Identify pattern pieces to be used in making a garment (C-K)	Use pattern guide sheet to select pattern pieces used in making a specific garment. Return pieces not needed to pattern envelope.
Identify proper placement of pattern pieces (C-K)	View filmstrips, film loops, or transparencies on pattern placement. Watch a demonstration on pattern placement. Identify pattern pieces which must be placed on fold of fabric and the direction each pattern piece should be placed in relation to the lengthwise grain of the fabric.

Behavioral Objectives	Learning and Evaluation Experiences
Interpret the cutting layout diagram on the instruction guide (C-C)	Select the appropriate cutting layout diagram on the instruction guide for a particular garment. Given specific situations, work in pairs to choose the diagram appropriate for a specific pattern size, width of fabric, and pattern view.
Identify correct placement of pins in pattern and fabric (C-K)	View a demonstration, transparency, or display illustrating correct placement of pins in fabric and pattern pieces. What direction are the pins placed in relation to the edge of the pattern piece? How many pins are necessary for each pattern piece? Where should pins be kept while the pattern is being pinned on the fabric?
Illustrate correct pin placement when pinning a pattern piece to a fabric (P-GR)	Pin pattern pieces to fabric, using correct pinning techniques. Ask your teacher to check the position and number of pins used. Practice correct pinning techniques in all sewing projects.
Follow steps in preparing for cutting (P-GR)	Lay out fabric and pattern for cutting. Include these steps: 1) Select correct cutting layout diagram for view, pattern size, fabric width, and nap. 2) Spread cloth out on appropriate cutting surface. 3) Follow pattern layout diagram for trial placement of pattern. Lay all pieces on fabric before cutting. 4) Check pattern layout with the diagram on the pattern instruction guide. Check to be sure grainlines are straight, correct pattern pieces are placed on fold, and pins are placed correctly.
Identify economical placement of pattern pieces (C-K)	View transparencies or displays of pattern layouts which are and are not economical. Identify pattern layouts which are economical and those which are not economical.

Behavioral Objectives	Learning and Evaluation Experiences
Give examples of layouts which illustrate economical pattern placement (C-C)	Look at several examples of pattern layouts. Select those layouts which illustrate economical pattern placement. Explain how each layout illustrates economical pattern placement.
Illustrate economical placement of pattern pieces (C-C)	View pattern layouts which are not economical in pattern placement. Change pattern placement in order to use less fabric. Explain the changes which were made. How did each change result in more economical placement of pattern pieces? Could other changes result in even more economical pattern placement?
Practice economical placement of pattern peices (P-GR)	Experiment with pattern pieces and fabric. Lay the pieces on the fabric several ways, being careful to place the necessary pieces on the fold, to have the grainlines in the right direction, and to pin correctly. How much less material was used in the most economical placement than in the least economical placement?
Identify napped fabrics (C-K)	Define nap. Examine samples of napped fabric to identify the nap. View two pieces of the same napped fabric placed so the nap runs in opposite directions on each piece. What difference is there in the appearance of the two pieces of fabric? How would this affect the appearance of a garment?
Give examples of napped fabrics (C-C)	Select examples of napped fabrics from a stack of fabric samples such as velvet, velveteen, corduroy, other pile fabrics, some knits, and shiny fabrics.

Behavioral Objectives	Learning and Evaluation Experiences
Identify proper pattern placement for napped fabrics (C-K)	View transparencies, bulletin boards, or displays illustrating proper pattern placement on napped fabrics. In what direction are pattern pieces placed in relation to the nap? Why is such placement important in garment construction? Will you need more or less fabric when using napped fabric?
Illustrate proper pattern placement for napped fabrics (C-C)	Prepare a bulletin board or display depicting proper placement of a pattern on napped fabric. Look at illustrations or examples of pattern layouts. Select layouts which are correct and layouts which are incorrect for napped fabrics. Explain selections.
Try pattern layouts on napped fabrics (P-GR)	Practice laying pattern pieces on napped fabrics, using discarded patterns. Check to be sure all pattern pieces are placed correctly in relation to the fold, grainline, and nap of fabric.
Identify pattern markings which are important when matching plaids or designs (C-K)	View pattern pieces to identify markings which must be matched when working with a repeating design or plaid.
Illustrate correct procedure for matching notches (C-C)	Use pattern pieces, and work in pairs to locate notches which must be matched during construction. Ask your teacher to check your work. Discuss any changes needed.
Practice matching a design before cutting fabric (C-Ap)	Use sample fabric with a simple design such as an even plaid. Pin pattern pieces on fabric, matching corresponding notches. Practice matching various designs until confidence is achieved in most situations. Use the following designs for practice: stripes, zigzag or geometric designs, and repeating designs.

Behavioral Objectives	Learning and Evaluation Experiences
	Test knowledge of various types of pattern layouts. Examine actual pattern layouts for plaid, napped, and plain fabric. Determine if the layouts are correct or incorrect. Point out incorrect placement of pattern pieces in the pattern layout.
Identify factors which could cause one to have too little fabric for a specific garment (C-K)	Name factors which could cause the custom dressmaker to have too little fabric for a customer's garment. Include the following: 1) Customer did not buy amount of fabric pattern requires. 2) Customer did not allow for matching designs or for napped fabric. 3) Pattern alterations added length or width which caused need for additional fabric.
Identify alternatives when one does not have enough fabric (C-K)	Name alternative courses the custom dressmaker may pursue if amount of fabric provided is inadequate. The following are possibilities: 1) Ask customer to purchase more fabric, if possible. 2) Ask customer to select another pattern. 3) Ask customer to purchase a companion fabric for collars, cuffs, bodice, jacket, or skirt, if possible. 4) Piece garment inconspicuously, if possible. 5) Piece garment by incorporating piecing as design detail.
Describe an appropriate solution when the amount of fabric provided by the customer is inadequate (C-C)	React to a specific situation involving a customer who has not brought enough fabric to the dressmaker. Describe the alternatives which are appropriate for that situation.
Cite procedures to use when cutting out garments (C-K)	View filmstrips, transparencies, or film loops on cutting procedures. List rules to follow in cutting out a garment.
	Define directional cutting. View a demonstration on directional cutting.

Behavioral Objectives	Learning and Evaluation Experiences
Illustrate directional cutting of a garment (C-C)	Describe the direction for cutting each pattern piece for a specific garment. Prepare a bulletin board illustrating directional cutting on various pattern pieces.
Practice cutting techniques (P-GR)	Use fabric scraps and discarded patterns to practice cutting curved lines, straight lines, and garment pieces. Practice until long, smooth strokes are achieved.
Demonstrate directional cutting (C-Ap)	Prepare fabric and pattern pieces for cutting. Cut out a garment following guidelines for cutting. Test your skill in cutting pattern pieces from fabric. Cut a pattern piece out using directional cutting while the teacher observes.
Name marking equipment used in transferring pattern markings (C-K)	Identify marking equipment to be used in transferring markings from pattern to fabric pieces. Name the tools as viewed on a transparency or in a display.
Identify correct methods of transferring markings to fabric (C-K)	View a filmstrip on using marking equipment. Note the equipment used for each method of marking. What marking methods are suitable for specific fabrics? View demonstrations of various methods of transferring markings from pattern to fabric. How are marks transferred to fabric using each method?
Select the marking equipment to be used for a particular garment (P-S)	Work in small groups to select the marking equipment needed for a specific situation.
Locate pattern markings to be transferred to fabric (P-S)	Choose the marking equipment for the marking method most appropriate for a specific project. Examine pattern pieces to determine which markings should be transferred to the fabric.

Behavioral Objectives	Learning and Evaluation Experiences
Try various marking methods (P-GR)	Practice several methods of transferring markings from pattern to fabrics, using fabric samples and discarded pattern pieces. Select the appropriate method of marking fabric for a particular garment. Transfer necessary markings to fabric. Test your ability to use correct marking methods. Mark a pattern piece, using the method most appropriate for the fabric.

GARMENT CONSTRUCTION--PRESSING

KEY IDEAS: Proper pressing techniques result in a smooth garment which is superior in appearance to an incorrectly pressed garment.

Proper pressing equipment and techniques preserve the shape of a garment.

Pressing during construction improves the final appearance of a garment.

A correctly pressed seam or dart will be smooth and will lie flat.

Final pressing smooths wrinkles caused by handling the garment.

WORDS TO KNOW:

press
directional pressing
pressing ham
point presser
sleeve board
press cloth
needle board
seam roll

Behavioral Objectives	Learning and Evaluation Experiences
Relate guidelines for pressing various textiles to specific garments (C-Ap)	Review the guidelines found in textile study for pressing various fabrics. Apply this information to pressing of actual garments.
Cite proper pressing techniques (C-K)	Watch a demonstration on pressing techniques for darts, seams, curved areas, points, zippers, sleeves, and hems. Notice the equipment used to preserve garment shape. What motion is used for pressing as opposed to ironing? What equipment is used to preserve the shape of curves or points? Are pins removed before pressing? Why?
	View a demonstration on pressing tucks, pleats, gathers, buttonholes, and pockets as needed.
Find examples of properly pressed construction details (C-C)	Examine construction details or samples of construction techniques. Decide if proper pressing techniques were used for darts, seams, sleeves, hems, and other details. Explain reasons for your decisions.

Behavioral Objectives	Learning and Evaluation Experiences
Position specific garment detail for pressing (P-S)	Set up equipment and garment needed to press a specific garment detail. Examine two garments, one pressed correctly during construction, the other pressed incorrectly. How do the two garments differ in appearance? Which garment would you prefer if you were a customer? Discuss the importance of using appropriate pressing techniques and procedures during garment construction.
Practice pressing techniques (P-GR)	Practice pressing garments or samples of construction details. Use proper equipment, and press in proper direction.
Relate the correct procedure for pressing during construction to specific situations (C-Ap)	Read case studies describing the procedure which a dressmaker used in pressing a garment during construction, or view skits depicting the same type of situation. Did she use directional pressing and press the garment at the proper time? If not, what corrections need to be made to result in correct pressing of the garment during construction?
Practice correct pressing techniques (P-GR)	Practice pressing samples of darts and seams. Use appropriate equipment and correct pressing techniques for pressing each type of dart or seam. Test your skill in use of pressing techniques to press a garment or specified parts of a garment using directional pressing, proper equipment, and correct techniques.
Cite correct methods for final pressing (C-K)	Watch a demonstration on final pressing. What is the purpose of the final pressing? What pressing techniques are used in final pressing?

Behavioral Objectives	Learning and Evaluation Experiences
Explain the correct method of final pressing (C-C)	View a filmstrip on final pressing of garments such as skirts, dresses, jackets, pants, coats. List steps as cited in film. Reach in a grab bag, and pull out garment or a slip of paper with the name of the garment on it. Describe the procedure to use in final pressing of the garment.
Practice doing final pressing on garments (P-GR)	Practice final pressing of garments using correct techniques for the fabric and garment details.

GARMENT CONSTRUCTION--BASIC CONSTRUCTION TECHNIQUES

KEY IDEAS:

Skill in basic construction techniques increases job opportunities for the dressmaker.

Basic construction techniques can be applied to all garments.

Proper application of basic construction techniques is an indication of quality construction in a garment.

Quality garments are produced by handling as little as possible during the construction process.

WORDS TO KNOW:

seam
dart
tuck
pleat
gather
seam finish
hem
facing
binding
collar
understitching
clean finish
armhole
zipper
placket
snap
hook and eye
button
buttonhole
belt
pocket
trim
interfacing
underlining
lining
staystitching
clip
notch
grade
directional stitching
elastic casing
topstitching

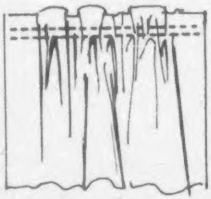
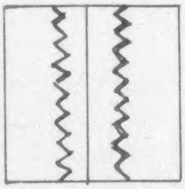
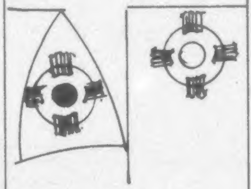
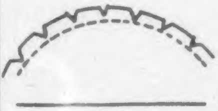
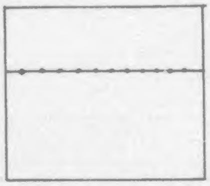
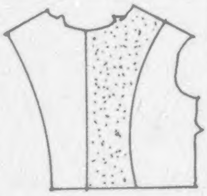
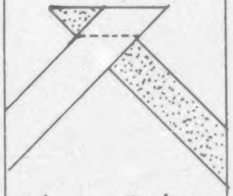
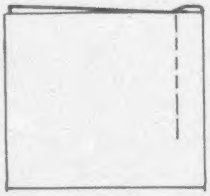
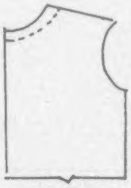
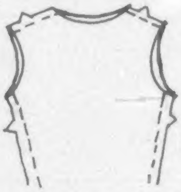
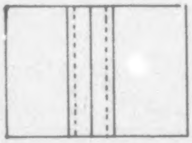
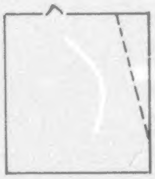
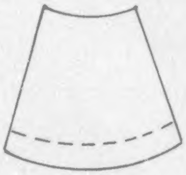
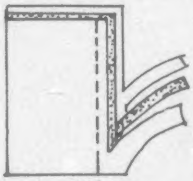
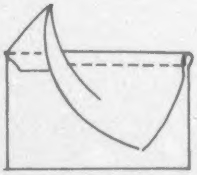
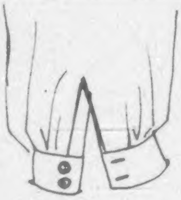
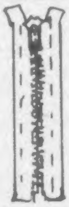
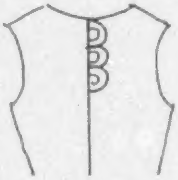
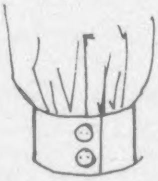
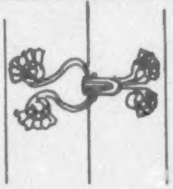
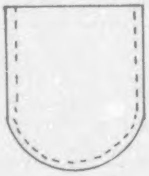
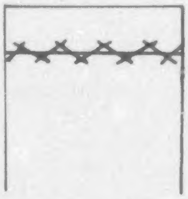
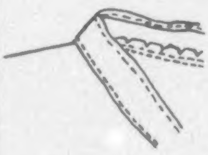
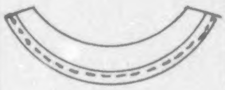
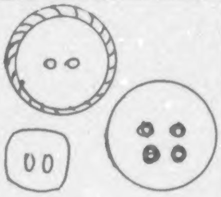
Behavioral Objectives	Learning and Evaluation Experiences
Identify the correct steps in various construction techniques (C-K)	Define specific construction techniques, and name steps used to produce them. Examine hand and machine techniques. Which method is faster? Which method results in the better appearance? When would a dressmaker use a hand method? A machine method? View films, filmstrips, charts, slides, or transparencies identifying the steps in specific construction techniques. Watch demonstrations on specific construction techniques as needed. Note the steps involved in both machine and hand techniques. Examine samples of construction techniques displayed on bulletin boards or flannel boards.

Behavioral Objectives	Learning and Evaluation Experiences
	Examine ready-made and custom-made garments. Notice construction techniques used in garments. List signs of quality construction.
	Take a field trip to a department store. Examine clothing to note construction techniques used in the garments. Which garments reflect quality construction techniques? Which garments show need for improvement in construction techniques? Explain answers.
Give examples of various construction techniques (C-K)	Play clothing bingo to find examples of construction techniques. (See p. 172.)
	Study a pattern guide and give examples of various construction techniques used in constructing the garment.
Explain procedures involved in various construction techniques (C-C)	Make a bulletin board illustrating the steps involved in a specific construction technique.
	Draw a slip of paper from a box. Explain the steps involved in the construction technique listed on the slip of paper.
Experiment with construction techniques (P-GR)	Follow the instructions on a pattern guide sheet to complete each construction technique.
	Keep a time chart for each technique and project completed, as a reference for determining the amount of time required to complete customers' garments. Compare time for hand and machine techniques.
	Demonstrate the steps involved in completing a specific construction technique.

Behavioral Objectives	Learning and Evaluation Experiences
Select an appropriate construction technique for a specific situation (P-GR)	Read a description of a particular situation requiring application of a construction technique. Select procedures appropriate for the situation.
Use appropriate construction techniques (P-M)	Construct a simple garment for another student in the class, following acceptable dressmaker procedures. Measure "student-customer" to determine pattern type and size. Pin, fit pattern, and alter pattern if necessary. Make fitting plan and schedule for construction. Fill out daily goal sheets. Have "student-customers" model garments when completed. Construct garments for actual customers or for needy persons, following acceptable dressmaker procedures. (A church group or club might provide materials needed to construct garments for needy persons.)
Analyze examples of construction techniques (C-An)	Analyze construction techniques used in the project you have completed. Were all steps done correctly and in the proper sequence? Point out improvements which could be made in the sample. Exchange samples with a partner, and apply the exercise to her work. Compare your notes with those of your partner.
	Work in groups to examine ready-made garments. Observe construction techniques used on darts, seams, collars, cuffs and other garment details. Rank the garments in order according to quality of construction.
Determine methods for saving time in garment construction (C-An)	Find short cuts which can be taken in construction and still yield a satisfying product. Share with class.
Develop criteria for evaluating specific construction techniques (C-S)	Work in groups to establish criteria for the quality of work acceptable in various construction techniques.
	Set up standards for a well constructed garment. Use these standards to evaluate garments you have made.

Behavioral Objectives	Learning and Evaluation Experiences
Evaluate construction techniques in garment made in class (C-E)	Use a check sheet to evaluate the garment you have made. Evaluate the garment made for you. Compare these evaluations with those of your teacher. Evaluate your skill in various construction techniques. Prepare samples of several specified construction techniques. Use a checklist to evaluate. Compare your evaluation with your teacher's evaluation.

B I N G O

 gathering	 pinked edges	 snap	 notches	 blind stitch
 inter-facing	 bias strips	 tuck dart	 staystitching	 basting stitch
 edge-stitched seam	 dart	 hemline	 grading	 French seam
 placket	 zipper	 fabric loop	 cuffs	 hook and eye
 topstitching	 catch stitch	 understitching	 clean finish	 buttons

Clothing Bingo

Directions for making Bingo Cards:

Make copies of the pictures on p. 172 and copies of a blank bingo card. Cut the pictures out, and paste one set of pictures on each bingo card, but do not make two cards exactly alike. Students could cut and paste their own cards. Shuffle pictures after cutting, and paste them on the cards at random to avoid having two cards alike.

(This game was designed for use with the unit on clothing construction techniques but can be easily adapted to other homemaking subject matter.)

Directions for playing Clothing Bingo:

1. Provide each student with a bingo card and a set of 23 numbered markers, such as paper circles.
2. The object of the game is to "Clothing Bingo" first by placing five markers in a vertical, horizontal, or diagonal line on the game card.
3. The teacher or designated student will draw a numbered definition from a container and read the number and definition aloud. Repeat until someone "Clothing Bingos."
4. As each definition is read, each player should pick up the marker with the same number; listen to the definition; decide which picture if any, on the card depicts the definition; and place the numbered marker on the picture.
5. A definition may be depicted by more than one picture, but only one picture square on the card may be covered each time a definition is read.
6. Answer may not be changed after the marker is placed on a picture square.
7. If all picture squares which could be used to depict a definition are covered, or if you do not see a picture which could depict a definition, place the numbered marker in a discard pile to the left of your card.
8. When you have covered five squares forming a horizontal, vertical, or diagonal line on your card, call out, "Clothing Bingo."
9. Continue playing until several players have "Clothing Bingoed."
10. When time is called, each player who has "Clothing Bingoed," tells the teacher the number of each definition he used to bingo. The teacher will read the numbered definition, and the player will describe the picture square he covered for that definition and the sewing term it depicts. Point out other squares which could have been covered to represent the definition. Discuss any incorrect answers.
11. If all answers used to bingo are correct, the player is a winner. If any answer is incorrect, he forfeits his bingo.

Definitions and Answers:

1. preserves grain of fabric during construction (staystitching)
2. trim seams at different widths to remove bulk (grading)
3. necessary to remove bulk from curved seam so it lies flat and smooth (notches)
4. prevents facings from rolling to top of garment (understitching)
5. adds soft fullness to garment (gathering)
6. jagged cut finish for a raw edge (pinked edges)
7. seam finish suitable for lightweight fabrics (french seam, edge-stitched seam)
8. straight stitching done on right side of fabric which usually follows design line (top stitching)
9. necessary for fabric to fit curves of body (darts)
10. may be used as fastener or as decorative detail (buttons)
11. fastener used above a zipper (hook and eye, snap, button)
12. opening above cuff on sleeve (placket)
13. strips of fabric cut diagonally to grain of fabric; strips can be joined and used as facings or as a decorative touch (bias strips)
14. fabric used to give support to parts of a garment (interfacing)
15. hemming stitch suitable for knit fabrics (catch stitch, blindstitch)
16. hemming stitch which may be done by machine or hand (blindstitch)
17. a slide fastener (zipper)
18. temporary stitch for the purpose of fitting or easing in fullness (basting
19. may be used as a fastener or as a decorative detail (zipper, buttons, loops
20. a type of dart which is not tapered on the end (tuck dart)
21. edge of facing or hem which is turned under and machine stitched (clean finish)
22. band on bottom of sleeves (cuff)
23. line which marks the finished length of a garment (hemline)

GARMENT CONSTRUCTION--FITTING

KEY IDEAS: Fitting during construction is essential in order to produce quality garments.

A properly fitted garment complements the wearer.

Many fitting problems can be corrected during construction.

WORDS TO KNOW:
silhouette seams
vertical
horizontal
construction lines
design lines
lengthen
shorten
alteration
baste

Behavioral Objectives	Learning and Evaluation Experiences
Cite the need for fitting during construction (C-K)	View models or dress forms wearing garments which fit well and garments which do not fit well. Select those which do not fit well. How does fit affect the appearance of the garment?
Describe features to look for in a well fitted garment (C-C)	Discuss points to check in determining a good fit, for example: grainlines centered; seams straight; garment free of wrinkles and bulges; center front and center back in line; correct placement of the darts; neckline close to the body; proper amount of ease.
Identify the steps in fitting during construction (C-K)	Observe a demonstration on fitting during construction of garments. At what points in construction are fittings necessary? What steps are involved in the three basic fittings during construction? For example, during first fitting, concentrate on the fabric, seamlines, grainlines, wrinkles, darts, necklines; during second fitting, on closings, sleeves; during final fitting, on hems.
Identify basic fitting problems (C-K)	View models, transparencies, or filmstrips illustrating basic fitting problems. How can a dressmaker locate fitting problems? What clues are given in the appearance of the garment when it does not fit well?

Behavioral Ojbectives	Learning and Evaluation Experiences
Give examples of fitting problems (C-C)	Look at garments on models or illustrations of garments which depict fitting problems. What is the problem in each garment or illustration? Explain what clues led to the recognition of the fitting problem.
Solve basic fitting problems (C-Ap)	Read case studies describing a dressmaker's procedures during construction. Was fitting done at the proper time? Did she follow the necessary steps in fitting the garment? Were fitting problems correctly identified and remedied?
Practice fitting techniques and methods of correcting basic fitting problems (P-GR)	Work with a partner to fit a garment. Locate areas which do not fit properly. Practice making the changes necessary for the garment to fit properly. Correct various basic fitting problems on sample garments. Check with the teacher to be sure all steps were completed correctly. Practice fitting muslin garments on dress forms to which body irregularity pads have been added. Test your skills in fitting by fitting garments to a customer.

CUSTOMER RELATIONSHIPS

KEY IDEAS: Desirable attitudes are essential for success as a dressmaker.

Profits accrue from the return of satisfied customers.

Satisfied customers are a dressmaker's best advertisement.

Customer satisfaction is dependent on personality characteristics and attitudes as well as skills of the dressmaker.

Quality workmanship pleases cutomers.

Informative records are essential to a dressmaker.

WORDS TO KNOW:

relations
dependability
record keeping
customer
punctuality
attitude
advertisement
personality characteristics
grooming

Behavioral Objectives	Learning and Evaluation Experiences
Name factors involved in customer-dressmaker relationships (C-K)	Ask several dressmakers to participate in a panel discussion on customer-dressmaker relationships. Possible questions include the following: 1) What records do you keep, and how are they organized? 2) How do you estimate the time it will take to complete a garment? 3) What personal qualities are an asset to a dressmaker? 4) What problems have you encountered with customers? How did you handle them? 5) What factors enter into pricing of work? 6) Why should a dressmaker keep up with fashion trends? 7) How can a dressmaker keep up with fashion trends?
Cite ways to obtain customers (C-K)	Interview several dressmakers to find out how they obtain customers. List methods of advertising which might be used by the custom dressmaker. Discuss advantages and disadvantages of each. Include newspaper advertisements, bulletin board notices in public places, radio announcements, and word of mouth from satisfied customers.

Behavioral Objectives	Learning and Evaluation Experiences
Identify information a custom dressmaker needs from the customer (C-K)	List information the dressmaker needs to obtain from the customer when she brings fabric for a garment. Include 1) amount of fabric purchased, 2) view of pattern selected, 3) body measurements, 4) notions purchased, 5) special instructions, 6) date garment needed, 7) date for first fitting, 8) any special instructions.
Identify records necessary for a dressmaker (C-K)	Listen to an income tax consultant discuss the need for financial records for cost determination and for income tax purposes when self-employed.
	Review the panel discussion to list records kept by dressmakers, or interview dressmakers to identify necessary records.
	Look at examples of forms for records which a dressmaker needs to keep. Include measurement forms and checklist for notions and services provided for the customer. Identify methods of convenient organization of records. Example: The dressmaker may keep records alphabetized by customer's last name.
Identify personal characteristics which contribute to success as a dressmaker (C-K)	View a filmstrip on desirable characteristics for a custom dressmaker. What characteristics depicted in the film should a dressmaker cultivate? What characteristics illustrated are undesirable in a custom dressmaker? How are grooming and appearance related to the custom dressmaker?
Describe factors affecting customers satisfaction (C-C)	List reasons for customer satisfaction and dissatisfaction on the chalkboard.
Solve situations involving customer-dressmaker relationships (C-Ap)	Complete open-end sentences or descriptions of a situation involving a customer. Describe actions which the dressmaker should take in each situation.

Behavioral Objectives	Learning and Evaluation Experiences
	Role play, or present skits of situations (provided by the teacher) which involve a customer and a dressmaker. Act out the situation in either a positive or negative manner. After the role play, discuss the situation. Did the dressmaker handle the situation properly? Will she receive favorable advertising from this customer? Do you think the customer will employ this dressmaker again? Play the "Custom Dressmaker" game. (See p. 181.)
Choose actions that give evidence of effective human relations (A-V)	Read case studies describing desirable and undesirable attitudes in a customer-dressmaker situation. Decide if the actions displayed by the dressmaker were desirable or undesirable in regard to customer-dressmaker relationships. Describe the action you would have taken in the same situation. Possible situations include customer not offering to pay for garment before leaving; customer feeling that the fee for dressmaker's services is too high; customer not satisfied with the garment, customer requesting garment be completed several days ahead of original date requested. Look at pictures which are applicable to human relations in a dressmaker-customer situation. What do you think is happening in the picture? Does this dressmaker have a good attitude toward her work? If not, how can her attitude be improved? Discuss the following statements: "The customer is always right." "The customer may not always be right, but she is always the customer."

Behavioral Objectives	Learning and Evaluation Experiences
	Test your skill in customer-dressmaker relationships. Listen to taped situations involving a dressmaker and her customer. Respond to the questions regarding each situation. (See p. 182.)

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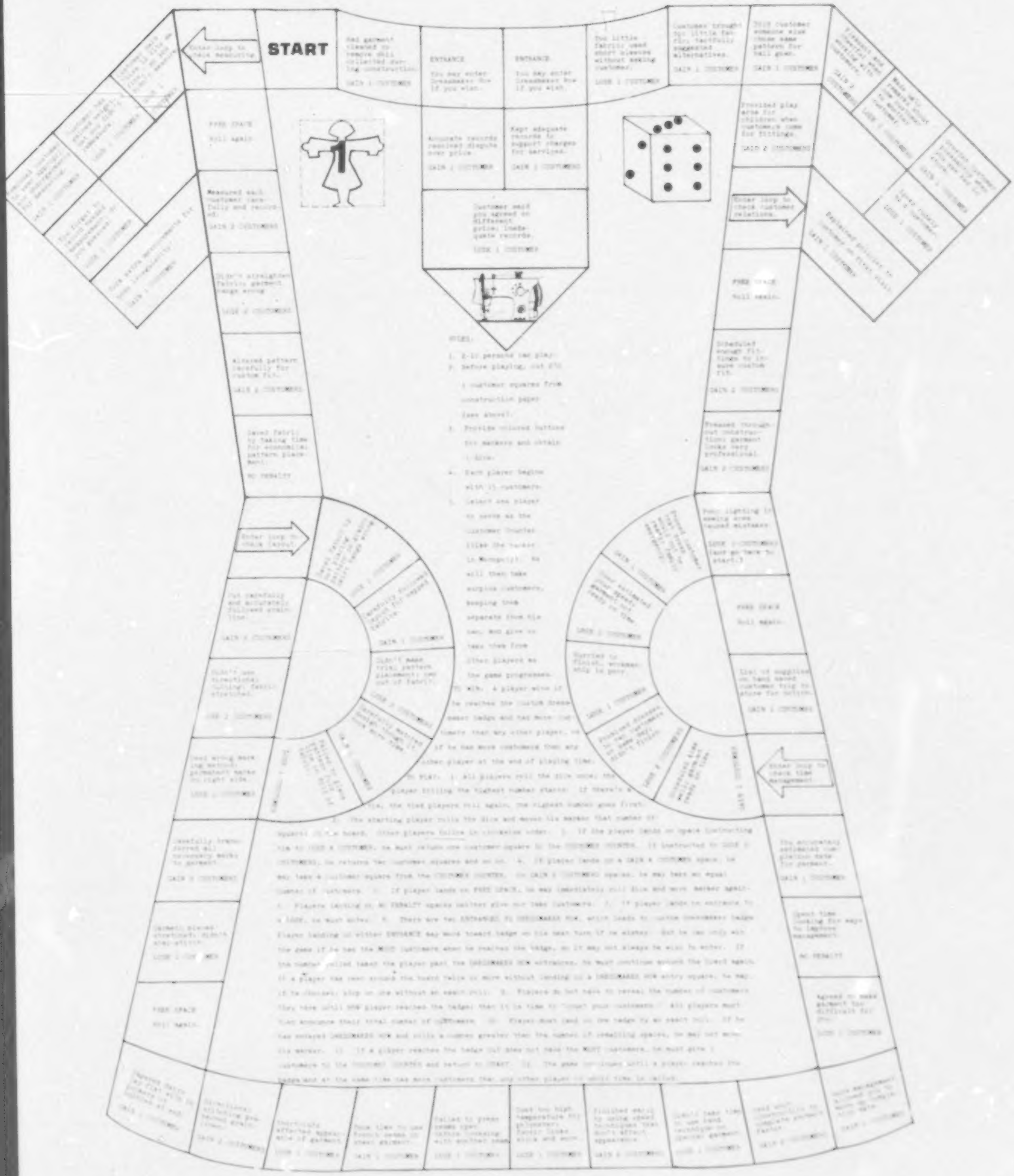
START
Enter loop to check measuring.
Customer said it fits well because you measured carefully. GAIN 1 CUSTOMER
Customer has gained weight; you did not check measurements. LOSE 1 CUSTOMER
Remeasured customer to check for needed adjustments. GAIN 1 CUSTOMER
You forgot to record needed measurements. LOSE 1 CUSTOMER
Took extra measurements for figure irregularity. GAIN 1 CUSTOMER
Had garment cleaned to remove soil collected during construction. GAIN 1 CUSTOMER
ENTRANCE You may enter Dressmaker Row if you wish.
ENTRANCE You may enter Dressmaker Row if you wish.
Too little fabric; used short sleeves without asking customer. LOSE 1 CUSTOMER
Customer brought too little fabric; tactfully suggested alternatives. GAIN 1 CUSTOMER
Told customer someone else chose same pattern for ball gown. GAIN 1 CUSTOMER
Pleasant and cheerful when working with customers. GAIN 2 CUSTOMERS
Made sarcastic remarks about the customer's figure to another customer. LOSE 2 CUSTOMERS
Provided customer assistance in selecting pattern and fabric. GAIN 1 CUSTOMER
Spoke rudely to a customer. LOSE 1 CUSTOMER
Explained policies to customer on first visit. GAIN 1 CUSTOMER
FREE SPACE Roll again.
Measured each customer carefully and recorded. GAIN 2 CUSTOMERS
Didn't straighten fabric; garment hangs wrong. LOSE 2 CUSTOMERS
Altered pattern carefully for custom fit. GAIN 2 CUSTOMERS
Saved fabric by taking time for economical pattern placement. NO PENALTY
1
Accurate records resolved dispute over price. GAIN 1 CUSTOMER
Kept adequate records to support charges for services. GAIN 1 CUSTOMERS
Customer said you agreed on different price; inadequate records. LOSE 1 CUSTOMER
Provided play area for children when customers come for fittings. GAIN 2 CUSTOMERS
Enter loop to check customer relations.
FREE SPACE Roll again.
Scheduled enough fittings to insure custom fit. GAIN 2 CUSTOMERS
Pressed throughout construction; garment looks very professional. GAIN 2 CUSTOMERS
Enter loop to check layout.
Saved fabric by not placing pattern pieces carefully; garment hangs wrong. LOSE 1 CUSTOMER
Carefully followed layout for napped fabrics. GAIN 1 CUSTOMER
Didn't make trial pattern placement; ran out of fabric. LOSE 2 CUSTOMERS
Carefully matched design throughout; took more time. GAIN 1 CUSTOMER
Failed to place pattern pieces on straight grain. LOSE 1 CUSTOMER
Cut carefully and accurately followed grain line. GAIN 2 CUSTOMERS
Didn't use directional cutting; fabric stretched. LOSE 2 CUSTOMERS
Used wrong marking method; permanent marks on right side. LOSE 1 CUSTOMER
Carefully transferred all necessary marks to garment. GAIN 2 CUSTOMERS
Garment pieces stretched; didn't stay-stitch. LOSE 1 CUSTOMER
FREE SPACE Roll again.
Poor lighting in sewing area caused mistakes. LOSE 2 CUSTOMERS (and go back to start.)
Pleased customer that dress would be ready for special occasion. GAIN 1 CUSTOMER
Under estimated time needed; garment not ready on time. LOSE 1 CUSTOMER
Hurried to finish; workmanship is poor. LOSE 1 CUSTOMER
Promised dresses to two customers on same day; didn't finish. LOSE 2 CUSTOMERS
Scheduled time well; garment ready on time. GAIN 1 CUSTOMER
FREE SPACE Roll again.
List of supplies on hand saved customer trip to store for notions. GAIN 1 CUSTOMER
Enter loop to check time management.
You accurately estimated completion date for garment. GAIN 1 CUSTOMER
Spent time looking for ways to improve management. NO PENALTY
Agreed to make garment too difficult for you. LOSE 1 CUSTOMER
Pressed darts lay flat with no puckers or bubbles at end. GAIN 1 CUSTOMER
Directional stitching prevented stretch. GAIN 2 CUSTOMERS
Overstitching affected appearance of garment. LOSE 1 CUSTOMER
Took time to use French seams on sheer garment. GAIN 1 CUSTOMER
Failed to press seams open before crossing with another seam. LOSE 1 CUSTOMER
Used too high temperature for polyester; fabric looks slick and worn. LOSE 1 CUSTOMER
Finished early by using speed techniques that don't affect appearance. GAIN 2 CUSTOMERS
Didn't take time to use hand techniques on special garment. LOSE 1 CUSTOMER
Used unit construction to complete garment faster. GAIN 2 CUSTOMERS
Good management allowed you to meet an impossible date. GAIN 1 CUSTOMER

RULES:

1. 2-12 persons can play.
2. Before playing, cut 270 1 customer squares from construction paper (see above).
3. Provide colored buttons for markers and obtain 1 dice.
4. Each player begins with 15 customers.
5. Select one player to serve as the Customer Counter (like the banker in Monopoly). He will then take surplus customers, keeping them separate from his own, and give or take them from other players as the game progresses.

TO WIN: A player wins if he reaches the custom dressmaker badge and has more customers than any other player, or if he has more customers than any other player at the end of playing time.

TO PLAY: 1. All players roll the dice once; the player rolling the highest number starts. If there's a tie, the tied players roll again, the highest number goes first. 2. The starting player rolls the dice and moves his marker that number of squares on the board. Other players follow in clockwise order. 3. If the player lands on space instructing him to LOSE A CUSTOMER, he must return one customer square to the CUSTOMER COUNTER. If instructed to LOSE 2 CUSTOMERS, he returns two customer squares and so on. 4. If player lands on a GAIN A CUSTOMER space, he may take a customer square from the CUSTOMER COUNTER. On GAIN 2 CUSTOMERS spaces, he may take an equal number of customers. 5. If player lands on FREE SPACE, he may immediately roll dice and move marker again. 6. Players landing on NO PENALTY spaces neither give nor take customers. 7. If player lands on entrance to a LOOP, he must enter. 8. There are two ENTRANCES TO DRESSMAKER ROW, which leads to custom dressmaker badge. Player landing on either ENTRANCE may move toward badge on his next turn if he wishes. But he can only win the game if he has the MOST customers when he reaches the badge, so it may not always be wise to enter. If the number rolled takes the player past the DRESSMAKER ROW entrances, he must continue around the board again. If a player has been around the board twice or more without landing on a DRESSMAKER ROW entry square, he may, if he chooses, skip on one without an exact roll. 9. Players do not have to reveal the number of customers they have until ONE player reaches the badge; then it is time to "count your customers." All players must then announce their total number of customers. 10. Player must land on the badge by an exact roll. If he has entered DRESSMAKER ROW and rolls a number greater than the number of remaining spaces, he may not move his marker. 11. If a player reaches the badge but does not have the MOST customers, he must give 3 customers to the CUSTOMER COUNTER and return to START. 12. The game continues until a player reaches the badge and at the same time has more customers than any other player or until time is called.

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Customer-Dressmaker Situations

Test your skill in customer-dressmaker relationships. Listen to taped situations involving a dressmaker and customer. Answer the questions about each situation.

SITUATION I

Mona has been a dressmaker for about 6 months. She is just getting established with customers. Mrs. Gregory comes to pick up a garment which Mona has completed for her daughter.

Mona: Hello, Mrs. Gregory. Come in, the dress is ready for you.

Mrs Gregory: Oh, good. Sandie wanted to wear it to a party this weekend, and she was so excited when I told her it was ready. How much do I owe you?

Mona: Five dollars.

Mrs Gregory: Mona, I know you only charged Mrs. Gray $4.00 for a dress you made for her.

Mona: Yes Mrs. Gregory, but the dress was quite a bit simpler than this one, and the fabric was not as difficult to work with.

Mrs. Gregory: Well, I really don't see how you can charge people different prices. Have you charged anyone else more than $4.00?

Mona: Yes, I have.

Mrs. Gregory: Can you tell me who and what the garment was like?

Mona: Well, I really can't exactly remember.

Mrs. Gregory: Do you have any records of prices you could show me?

Mona: No, I haven't had time to begin keeping records yet.

Mrs. Gregory: Well, I guess there is nothing I can do but pay you!

Mona: Well, I'm sorry, Mrs. Gregory. I guess I should begin keeping records. I hope you will call me again when you have more sewing.

Mrs. Gregory: Well, I'm not sure that I need anymore sewing done. Good-bye.

After Mrs. Gregory left, Mona felt quite unhappy. She knew that she had lost a customer.

SITUATION II

Lisa is married and has been a dressmaker for a few months. She is getting a slow start and really can't figure out what is wrong.

Lisa: I don't know why I don't have more customers! I don't know what I'm doing wrong.

Phone rings.

Lisa: Hello (pause) Yes, Mrs. Gray, I can have the dress ready earlier. Is next Tuesday early enough? (pause) All right, good-bye. Well, I guess I will have to get busy and get that dress finished. Well, its about 3 hours before I need to start dinner, so I have some time to work.

(pause)

Lisa's husband: Hi, dear. What's for dinner?

Lisa: Oh, dear I didn't realize it was time for you to get home. I'll fix something now. I have been working on this dress so it would be ready for Mrs. Gray next Tuesday, and I forgot to notice what time it was.

Husband: Well, don't forget Mother is staying with us this weekend, and you will need to keep her busy.

Lisa: Oh, I did forget, but I'm sure we'll manage.

Time passes and it is Monday. The dress is supposed to be ready tomorrow. Lisa is hurrying to finish the dress. However, because she is trying to go to fast, her work is not as good as usual. She must finish the dress; so she does not correct mistakes in her sewing. She finishes late that night and wearily drags to bed. Tuesday comes and Mrs. Gray knocks on the door.

Lisa: Hello, Mrs. Gray. Here is your dress. I had to hurry, but I did finish it.

Mrs. Gray: Well, I hope you didn't have to hurry too much. Here is your money.

Lisa: Thank you and I hope you enjoy the dress.

After Mrs. Gray gets home, she looks at the dress and is quite unhappy with the workmanship. She decides to look for another dressmaker.

SITUATION III

Joanie has been a dressmaker for about a year. However, her customers are gradually taking their business to other dressmakers. Joanie really doesn't know why. See if you can decide why she is losing customers.

(Phone rings)

Mrs. Brown: Joanie, I just wanted to check to be sure the dress was ready before I came by.

Joanie: Well, I'm glad you called because it is going to take me a few more days to finish it.

Mrs. Brown: Oh, are you having trouble with it?

Joanie: No, I just didn't work on it this weekend because some friends called and wanted me to go out of town with them.

Mrs. Brown: (irritated) Well, I do hope you will have it ready by the end of the week!

Joanie: Well, I'm pretty sure I will. Bye.

(Phone rings)

Joanie: Hello.

Irene: Hi, Joanie. Are you busy?

Joanie: No, one of my customers just called and got upset because I didn't have her dress ready.

Irene: Oh, well, I was going to see if you could go to the show with me this afternoon, but I guess you can't.

Joanie: No, I'll go. She can wait a few days for that dress even if she doesn't want to!

SITUATION IV

Barbara has been a dressmaker for one year. She has quite a few steady customers. She manages to keep her dressmaking activities and homemaking activities done on time. After being on vacation, Mrs. Smith has brought fabric and a pattern to Barbara for a new dress.

Barbara: Did you have a nice vacation?

Mrs. Smith: Oh, yes. We had a lovely time and the food was so good! I know I gained a few pounds, but I certainly enjoyed it!

Barbara: Well, you certainly don't look like you gained weight, but perhaps we should take your measurements again just to be sure the pattern alterations are correct.

Mrs. Smith: Well, that might be a good idea, or could you just alter the garment if changes need to be made.

Barbara: Well, usually altering the pattern results in a better fit, and it would be a shame if such a pretty dress didn't fit well.

Mrs. Smith: Well, it will only take a few minutes, and I would hate for the dress to fit poorly.

Barbara: Let's see; you brought all the necessary materials. I can have the dress ready in two weeks. Is that all right?

Mrs. Smith: Well, I really would like to have it sooner.

Barbara: Well, you can see on my schedule that I have two dresses to finish this week, and I really don't think I can have yours ready until next week. I do want to have time to do a good job on it, but I will have it ready as soon as possible.

Mrs. Smith: Well, that's all right. I can wait two weeks for it. Thank you, Barbara.

Barbara: Good-bye and thank you very much.

QUESTIONS FOR SITUATIONS

Situation I

1. What mistake did Mona make as a dressmaker?
2. What could she have done to prevent situations such as this one?
3. Will Mrs. Gregory serve as a good source of advertising for Mona? Why or why not?

Situation II

1. Why did Lisa lose Mrs. Gray as a customer?
2. How could this have been avoided?
3. How could a schedule help Lisa?

Situation III

1. What qualities did Joanie display which are undesirable in a dressmaker?
2. Why do you think she was losing customers?
3. What would you have done if you were the dressmaker?

Situation IV

1. What qualities did Barbara display which are desirable in a dressmaker?
2. How were Barbara's records useful to her?
3. Did Barbara make the right decision by telling Mrs. Smith that she could not have the dress ready sooner? Why or why not?

CONCEPT: Assembly-Line Production

JUSTIFICATION:

The apparel industry is the United States' largest employer of women in manufacturing today. According to the *Occupational Outlook Handbook, 1972-73* edition, four out of five garment workers are women. Most women are sewing-machine operators. However, many others work in positions varying from hand-sewer to designer. In positions such as cutters and markers, pressers, production managers, engineers, and salesmen, men are usually more numerous.

There is a great turnover in the industry, and every year many new workers are needed just to replace those who leave. With the increasing population and the trend toward more women working outside the home, there will be an increase in the demand for clothing, resulting in a rise in employment in the industry. A highly skilled garment worker is a tremendous asset to the manufacturer.

CVAE students training in clothing service need to learn the progression of a garment through a factory and to become acquainted with the assembly-line method of construction in order to compete for jobs requiring skills in these areas. Apparel production will continue to rely upon human workers, despite the accelerated pace of mechanization in industry; therefore it is important to acquaint the student with the skills required in assembly-line production.

Even though the laboratories in schools are not equipped to produce complicated assembly-line products, some simple projects can be constructed using assembly line techniques so that the CVAE student may be provided with realistic experiences.

OVERALL OBJECTIVES:

Apply basic sewing skills to assembly-line construction (C-Ap)

Pursue skills needed to operate power sewing equipment efficiently (A-Res)

Acquire skills in using assembly-line techniques for the construction of garments (P-M)

Demonstrate proficiency in assembly-line construction techniques applicable in wage-earning occupations (C-Ap)

Analyze job opportunities and skills necessary for employment in the clothing industry (C-An)

STEPS IN GARMENT PRODUCTION

KEY IDEAS: Many different jobs are available in a garment factory.

Most apparel workers are handsewers or machine stitchers.

Following safe working procedures results in personal security, increases production, and results in higher earnings.

Assembly-line techniques increase production.

WORDS TO KNOW:
- designer
- pattern maker
- hand spreader
- machine spreader
- markers
- cutters
- assemblers
- hand sewers
- machine stitchers
- sub-assembly
- under pressers
- finish pressers
- inspectors and checkers

Behavioral Objectives	Learning and Evaluation Experiences
Cite assembly-line techniques (C-K)	Listen to a definition of assembly-line production. Participate in using assembly-line production by making purse-sized sewing kits that can be sold. Directions: Using a plastic prescription bottle, cut a piece of felt the height and circumference of the bottle. Insert a needle, two straight pins, and two safety pins into the felt, and place in the bottle. Wrap 18-inch of each of several colors of thread (white, black, beige, brown, grey, and red) around a notched card cut a little narrower than the bottle, and place in the bottle. Include a plastic thimble in each kit. First assemble kits, with each individual assembling complete kits for a period of 10 minutes. How many kits have been assembled? What tasks are involved in the job? Organize the assembly of kits by assigning a task to each individual. Then assemble the kits using assembly-line techniques for 10 minutes. Compare the number of kits assembled by each method. Which techniques is faster? Cite the features of assembly-line procedures.

Behavioral Objectives	Learning and Evaluation Experiences
Identify the orgainizational system of a garment factory (C-K)	View transparencies of a garment factory flow chart showing progress of a garment through the factory, from the designer to the shipper.
	Tour a garment manufacturing plant. Cite major operations in making apparel, including designing, cutting, assembling, stitching, and pressing. Note the jobs available. Which are non-sewing operations?
	Listen to a manufacturing representative describe the operations in a garment factory. Ask questions about anything you do not understand.
List jobs available in the garment industry (C-K)	View a film on the garment industry. What jobs are available in a garment factory? List them on the chalkboard. Note the normal progression of a garment through a factory.
Describe tasks involved in each job (C-C)	Make instant slides illustrating each job in a garment factory. Summarize the duties involved in each job.
	Read a book describing jobs and tasks in garment production. Make an outline of jobs and tasks in garment production.
	Play the game, "What's My Job," using job duties in a garment factory, and a sort board. (See p. 199.)
Name the parts of hard patterns (C-K)	Look at samples of the hard patterns used in the garment factory. Note the notches and holes in the pattern. What is meant by each notch? Examples: folding notch, joining notch, dart notch. What does each hole mean? Examples: buttonhole mark, pocket placement holes, dart point. To what pattern pieces would each edge of the pattern be joined?

Behavioral Objectives	Learning and Evaluation Experiences
Cite steps in making a marker (C-K)	Watch a demonstration on the procedures for using hard patterns to make a marker. What is used to trace around the pattern pieces? How will the marker be used to cut many layers of cloth? If a marker is used on single thicknesses of cloth rather than on doubled cloth, how are right and left sides of garments formed? How can a permanent marker be made?
Explain the purpose of a marker (C-C)	Observe as several different layouts are used to make a marker for the same pattern. Why is it important to place pattern pieces so that the least amount of material is used?
Show how to make a marker (C-Ap)	Use hard patterns provided by teacher, and make a marker on butcher paper using the least amount of material possible. Trace around pattern pieces with chalk or crayon. Ask teacher to point out ways fabric might have been saved by more economical placement of pattern pieces.
Cite procedures in making a "lay" (C-K)	Observe a demonstration on the use of a marker in making a "lay." What is a "lay"? Why is each ply of cloth in lay the same length as the marker? If all plies are not the same width, how wide should the narrowest ply be? How are the plies stacked to form a lay? Why should wrinkles be smoothed out? What may happen if the fabric is stretched? How is the amount of fabric of each color determined?
Explain the relationship between a "lay" and a bundle (C-C)	Discuss the use of the bundle system in assembly-line production. Describe how a bundle is made. How is a bundle made from a lay?
Identify cutting tools used in garment factories (C-K)	Look at pictures of tools used to cut cloth in garment factories. Which will be used in the CVAE classroom? Why is accuracy essential in cutting through a number of plies or layers of cloth?

Behavioral Objectives	Learning and Evaluation Experiences
Describe the method used for cutting through a lay (C-C)	Discuss the operation of a cutting machine. Why is it important to keep the lay (layers of material) flat as the knife enters it? What would be the results if safety procedures were not observed, and the operator did not remain alert?
Attempt to cut several layers of cloth accurately (P-GR)	Practice cutting through several layers of cloth accurately. Compare the top and bottom layers with the hard pattern? Is either layer larger or smaller than the pattern? What would result if pieces were not exactly the same size as the pattern?
Cite procedures for marking garment pieces (C-K)	Look at transparencies or pictures showing tools used to mark garment pieces. How are notches made? How deep should a notch be? How are holes made? Why may a thread marker be used to indicate sewing points.
Give examples of the methods used for marking garment pieces (C-C)	Look at garments to locate the markings used to aid in assembly. What markings are used?
Follow procedures for marking garment pieces (P-GR)	Practice marking pattern pieces, using methods to be followed in the CVAE clothing laboratory.
Cite information included in shade marking (C-K)	Observe a demonstration showing ways of shade-marking piles, including chalk-marking, stamp-marking, and ticket-marking. What information may be included? (Cutting number--to refer to a particular cutting; lot number--to indicate the style of garment; size--to keep parts of different-sized garments separated; ply number--to indicate layer of cloth in the lay.) Why is shade marking necessary? How may shade tickets be attached to garment pieces? Why is it important for sewing machine operators to carefully match shading marks or tickets? What will happen if shading marks are ignored?

Behavioral Objectives	Learning and Evaluation Experiences
Explain why shade marking is necessary (C-C)	Look at garments in which differences in shades of garment parts are obvious. Would you want to buy these garments?
Utilize shade marking in class projects (C-Ap)	Practice making shading marks to indicate which part belongs to which garment or item.
	Practice reading shade marks. What would you do if you suddenly noticed that you were joining ply 24 to ply 25 of a bundle? What would you do if you received a bundle that was not shade marked?
List checks the fitter makes on garment parts (C-K)	Observe as your teacher points out checks the fitter makes on garment parts. Check the following: 1) The parts are all there. 2) The parts will join properly. 3) Notches and marks for pockets, pleats, etc. are in the bundles. 4) All areas within the part have been cut for slashes, pockets, or darts. 5) All trimmings, facings, interlinings, or other findings needed by the operator are tied together with the bundle. How can the fitter affect your earnings as an operator.
Identify aids which contribute to sewing efficiency (C-K)	Study pictures showing aids which contribute to operation efficiency, such as tables, bins, horses, and chutes. Why are different aids needed for different sewing operations? What is the "ticket" system?
Explain flow charts for a particular garment (C-C)	Study flow charts showing arrangement of machines and equipment in sewing rooms of factories producing different garments. Trace a single garment through the sewing room. What is a sub-assembly? What is meant by "balanced production"? Why does each different garment pattern require different procedures? What sewing machines are used? What pressing equipment is used? When is pressing done? What is used to trim threads? Why is the flow of work important? How do the piece-work coupons on a ticket determine the flow of work?

Behavioral Objectives	Learning and Evaluation Experiences
Prepare a list of steps for a sewing machine operator to follow (C-Ap)	Identify the steps a sewing machine operator goes through in performing a specific task. Example: get; match plies; insert (place work under the foot); backstitch, line up work (check edges and get set for the sewing stroke); sew seam, making only designated stops; stop and remove work; trim (if required); dispose. How will these steps affect an operator's efficiency or flow of work?
Demonstrate assembly-line techniques (C-Ap)	Practice performing a specific operation used in making a garment using assembly line techniques. (See p. 204.)
Identify the responsibilities of the sewing machine operator (C-K)	Listen as the teacher explains procedures for housekeeping, getting service for the machine, making suggestions to management. How can time needed for obtaining supplies such as thread and needles be minimized? Where can needles, thread, and other sewing necessities be obtained?
	Examine a production card. (See p. 214.)
Explain the role of the production card (C-C)	Discuss the use of the production card for planning the number of sewing-machine operators, for routing, and for preventing pile ups.
Cite the importance of quality control (C-K)	Listen as the teacher explains quality standards and emphasizes the importance of watching for one's own errors.
	Listen to an interview with a clothing factory representative. Who makes repairs to damaged or incorrectly assembled garments? How does having to make her own repairs cost the operator money? What may happen if an operator continually makes errors?

Behavioral Objectives	Learning and Evaluation Experiences
Identify the methods used to compute pay in the garment industry (C-K)	Acknowledge the use of piece-work coupons for determining pay. Examine a sample piece-work coupon.
Explain the role of the coupon (C-C)	Discuss the use of piece-work and the importance of increasing speed and accuracy. (More completed bundles which pass inspection mean more pay.) Why would a special repair operator make more money than a regular operator? When may repairs be made if the foreman or forlady does them?
State procedures for inspecting, trimming, and repairing garments (C-K)	Observe a demonstration showing procedures for inspecting, trimming, repairing work correctly.
Identify points to be inspected in garments (C-K)	List points the inspector may check. Include the following: measurements, open seams, damage to the material, parts sewn wrong, raw edges on turned seams, other defects which would affect the sale of the garment. What tools or machines may be used to trim loose threads? Who may trim instead of the inspector? What does the inspector do if she finds damaged garments? What might cause a garment to be classed as a "second"? When in production of a garment may inspection be done? How does frequent inspection during production save time and energy?
Identify errors to watch for when inspecting garments (C-K)	View illustrations of common errors in garments--skipped stitches, improper turning of corners, too-wide seams, too-narrow seams, crooked seams, notches ignored.
	Look for errors in garments, such as skipped stitches, improper turning of corners, too-wide seams, too-narrow seams, crooked seams, or notches ignored.

Behavioral Objectives	Learning and Evaluation Experiences
Explain the importance of inspection (C-C)	Discuss relationship between errors and inspection. What is meant by tolerance? Why does tolerance vary among garments? Why is inspection so important in the garment industry?
Cite pressing procedures used in producing a particular garment (C-C)	Listen to case situations describing steps in producing specific garments. When was pressing done? What is "under pressing" or "seam busting"? When was the pre-creasing machine used? What equipment was used in finish pressing? Why might a sewing machine operator need to know pressing procedures?
Name projects adaptable to assembly-line production in the classroom (C-K)	Observe a display of projects suitable for assembly-line production. Examine projects. Note construction processes involved in each project. (See p. 204.)
Describe project for assembly-line construction (C-C)	Decide on a project to construct in class. Examine a sample to determine the order in which tasks should be performed to produce the project. How many pieces of fabric and trim go into this project? Which pieces are put together as sub-assemblies and later joined together? What order is followed in making and joining these sub-assemblies? Is pressing required in the assembly of the project? Are the seams matched? Is the use of attachments required?
Apply the garment factory flow system to the classroom (C-Ap)	Show how the classroom might be arranged for constructng a specific project by the assembly-line method. Draw a diagram of classroom and proposed set-up on chalkboard.
Duplicate assembly-line techniques for a specific project (P-GR)	List construction breakdown. Make a chart of jobs to be done in the class project and the order in which they are to be done. Carefully plan procedures for performing each task and for moving bundles to next operator. Volunteer for specific jobs. Use a rotation chart, or use task performance chart. (See p. 206.)

Behavioral Objectives	Learning and Evaluation Experiences
	Time each task in the assembly to determine how many workers are needed in each operation, so that one piece of the project is not delayed until the piece it is to be joined to is ready. What is meant by "pile-up"?
	Set up the classroom to employ assembly-line techniques of cutting, marking, bundling, stitching, inspecting, finishing, and pressing as follows: 1) Use cardboard pattern to make a marker for cutting. 2) Use tailor's shears to cut as many layers of cloth at one time as it is possible to cut accurately. 3) Follow acceptable procedures for marking each piece, using notches and holes or thread marks. 4) Shade-mark each ply, using chalk marking, stamp marking or ticket marking. 5) Bundle according to sub-assemblies. 6) Check bundles. 7) Construct sub-assemblies. 8) Join sub-assemblies. 9) Press, inspect and trim during construction at designated points. Mark errors, using check list. Return piece to operator for repair, if needed. 10) Do final inspection. Have repairs made by operators as needed. 11) Do final pressing.
Measure progress in using assembly-line techniques (P-M)	Let the teacher time your performance of specific operations with a stop watch to find the particular element or elements of the job that are retarding your efficiency.
Cite safety regulations to follow in the lab (C-C)	Cite accidents resulting from improper use of power sewing equipment. (Obtain clippings from factory safety bulletins.) Review lists of safety rules (in unit on safety) to follow in using power sewing equipment. (See p. 54.)

Behavioral Objectives	Learning and Evaluation Experiences
Comply with safety rules (A-Res)	Obey safety rules when operating power sewing equipment in the sewing lab. Participate in "Miss Safety" Contest. Student observing most safety rules receives banner.
Choose to follow safety rules while working in the lab (A-V)	Exhibit good safety practices by following safety rules in the sewing lab without being reminded.

TERMS USED IN THE TRADE

Assemblers - persons who prepare the fabric pieces for the sewing room. They mark the location of any construction details. They gather together and bundle all the fabric pieces and notions required for each garment. They ticket each bundle and send it to the sewing department.

Backstitch - a stitch used at the beginning and end of seam to reinforce.

Bar tack - tacking with a bar of stitches made on a zigzag pattern, used to reinforce.

Bundle - grouping together pieces of material to be sewn together, or a quantity of completely sewn items.

Cutter - person who cuts the pattern pieces with an electric machine that cuts through all layers at one time. He also makes notches in the edges of the material to show matching points for assembling the pieces.

Cycle time - the amount of time that should be used to complete the unit, bundle, lot, sub-assembly, or garment.

Designer - person who gets ideas for new styles and draws picture to show how the clothes will look.

Dispose - the motion an operator goes through to get rid of the part after sewing is completed--also refers to the area where the part is placed.

Fitter - person who matches the cut pieces to the hard pattern to make sure they will match with others pieces to which they are sewn.

Fitting (bundles) - matching of bundles after they are cut, to make sure they will match with bundles to which they are sewn. Also, refers to checking of cut bundles for markings and trim needed by an operator to work on that bundle.

Fitting (garment parts) - preparing cut parts by marking with chalk, yarn, or other aids, locations for buttonholes, buttons, pockets, belt loops, etc.

Get - the motion an operator goes through to obtain the next piece of material she will sew--also refers to the area where the material is placed for the "get."

Hand sewer - person who joins or reinforces parts of articles or garments or sews buttonholes and attaches fasteners to articles, or sews decorative trimmings to articles or garments by hand. Also called a hand finisher.

Inspector - person who examines workmanship of operators during construction--also examines finished garment--sometimes cuts off all loose threads, removes basting stitches, and brushes lint and threads from finished garment.

Irregulars - term used to indicate imperfect or damaged garments that are completed.

Lay - the total number of plies of material spread out on a long cutting table, from which identical parts are cut at one time.

Making - the complete construction of a garment including all cutting, sewing, and pressing operations.

Make-up pay - the difference an employee is paid when production is not up to minimum wage.

Marker - a ply of cloth or paper on which the parts of the garment to be cut have been outlined to make possible use of least amount of material.

Marking - outlining with soap chalk, the cutting lines of a garment on the top of a lay using heavy paper patterns as guides.

Method - the approved motions for doing an operation.

Notch - a small slit cut into the edge of a garment part to indicate a checkpoint to the operator.

Pattern - a piece of hard cardboard in the shape of the garment part, which is placed on the material and then outlined with pencil or crayon leaving the outline of the part on the cloth.

Pattern marker - person who traces pieces to be cut on the top layer of material. He arranges pattern pieces to get the most cuttings possible from a specific quantity of material.

Pick up - picking up the pieces of a sub-assembly that will be sewn together, then placing them in the correct position for sewing.

Piece-work coupon - coupon attached to a bundle or unit, and kept by the worker upon completion of unit--a means used to figure pay.

Presser - person who under-presses during construction or who gives garment final pressing after sewing is completed.

Quota or standard - the amount of completed units that each operator must complete in a standard day's work.

Sewing operator - person who performs a particular stitching operation on the garment.

Shade number or handling sequence - a method of marking that enables the operator to keep the different shades of materials in proper order.

Skipped stitch - a stitch that the machine does not make--one that is twice as long as it should be----a skip.

Spreading - laying cloth back and forth by hand or by mechanical device, on a cutting table.

S.P.I. - number of stitches per inch

S.P.M. - number of stitches per minute--refers to the speed of the machine.

Stroke (sewing) - the length of material that an operator can feed in without stopping.

Sub-assembly - a part of the garment that is made separately as a unit before it is joined to the main garment.

Ticket - a numbered paper marker attached to each part of a garment to make sure that the proper parts are assembled together.

Under-press - to press the underside of a garment during its construction to open seams and to shape it--done mostly on high quality garments.

"What's My Job?"

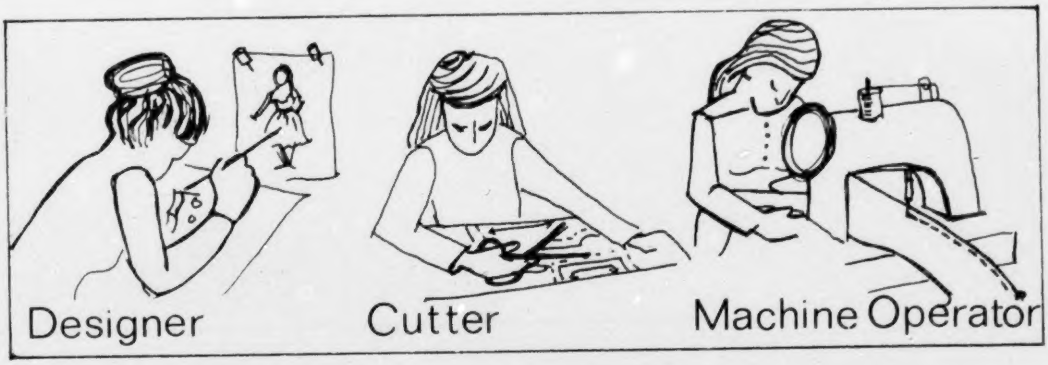
Each student plays the game "What's My Job?" to determine his basic knowledge of the garment industry. The student is given a board on which cup hooks are mounted in parallel rows. On alternating rows, sketches of jobs in the garment industry are hung. The student is given cards with the names of jobs on them and asked to hang the card with the correct name of the job directly below the corresponding sketch. The student is given more "job cards" than sketches displayed and instructed that some of the choices may not be used. Later the sketches may be exchanged for cards with the names of the jobs on them. The student is then given a group of cards with names of job tasks on them and asked to hang the correct task descriptions directly below the corresponding job title.

Job Titles:

Directions: For each sketch of a job on the sort board, select the correct name of the job from the stack of job cards you were given. Hang your choice on the hook directly below the sketch. Some job cards will not be used, and each sketch has only one correct answer. After you have finished, ask the teacher to check your answers.

Job Tasks:

Directions: For each job named on the sort board, select from the stack of task cards you are given the task or tasks which are required in each job. Hang your choice or choices directly below the name of the job. Some jobs have more than one correct answer. When you have finished, ask the teacher to look at your answers.


Designer
Cutter
Machine Operator

Gets ideas

Cuts material

Stitches seams

Draws pictures

ASSEMBLY-LINE PROJECT

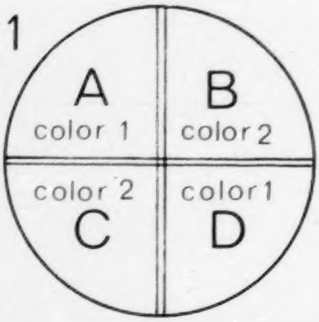
SCHOOL PILLOW

Materials Needed:
- 18-inch cardboard circle
- 4 cardboard quarter circles cut from a 19-inch circle
- 2 pieces of fabric in school colors
- 1 spool thread
- 3/4 pound of shredded or chopped poly foam
- Embroidery thread in school colors

To Cut:
- Cut 18-inch circle for pillow back and two quarter circles from one color
- Cut 2 quarter circles from second color.

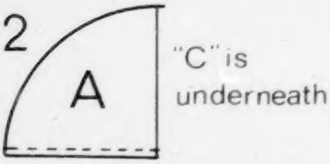
Instructions:

1


A
color 1
B
color 2
color 2
C
color1
D

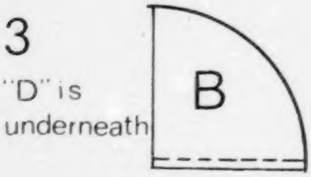
1. Lay 4 pieces on table alternating colors.

2


A
"C" is
underneath

2. Stitch parts "A" and "C" together using 1/2-inch seam.

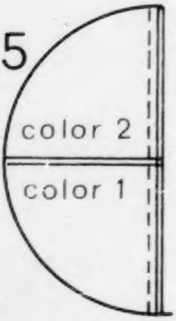
3


"D" is
underneath
B

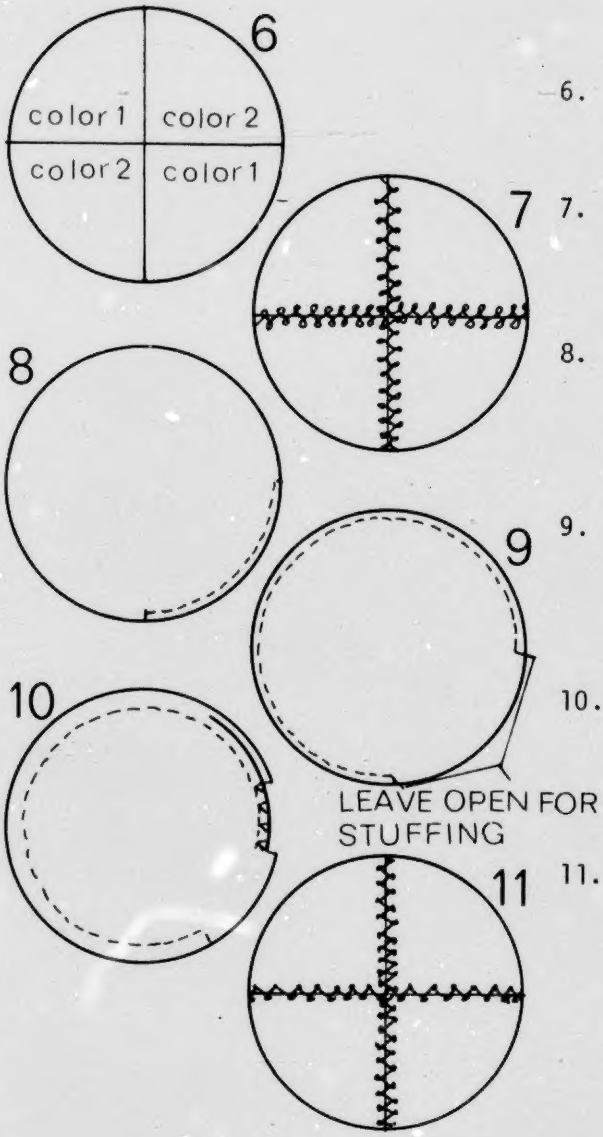
3. Stitch parts "B" and "D" together using 1/2-inch seam.

4. Press AC and BD seams open.

5


color 2
color 1

5. Lay part AC down right side up. Lay part BD on it, right side down. Match edges and center seam; stitch the length of the piece. Press seam open, open circle, and press flat.



6. Your circle should look like Figure 6. This is the top of the pillow.

7. Decorate the cross seams with some type of decorative hand stitch, such as cross stitch or feather stitch.

8. Stay-stitch on seam allowance a quarter the way around each pillow to mark seam allowance for hand-stitched opening for stuffing.

9. Lay the back on the top, and stitch around the circle, leaving 6 inches open between two cross seams. Stitch the seam again (double stitched seam).

10. Trim one-half of the seam allowance away, leaving 1/4-inch seam allowance. Notch the seam allowance approximately every inch.

11. Turn. Stuff. Turn edges of opening in on stay-stitching line, and slip stitch together.

Division of Tasks:

Assembly-Line Method

Job- 1- Pattern Maker (may double as a cutter)--make cardboard pattern.

Job- 2- Cutter--cut fabric according to patterns, and stack according to color and size or shape.

Job- 3- Stitcher No. 1--stitch quarters together into half circles.

Job- 4- Presser--press open seams AC and BD open.

Job- 5- Stitcher No. 2--stitch the half circles AC and BD together.

Job- 6- Presser--press center seam open.

Job- 7- Hand Sewer No. 1--decorate with hand stitches.

Job- 8- Stitcher No. 3--stay-stitch openings, and stitch front and back together.

Job- 9- Trimmer--trim and notch the seams.

Job-10- Stuffer--turn and stuff pillow.

Job-11- Hand Sewer No. 2--hand stitch opening.

Job-12- Inspector--inspect for flaws, and pack for shipment.

FLOW CHART

Pattern Maker ______________________________

Cutter ______________ Quarters ______ Back Pieces ______

Stitcher No. 1 ______________________________

Presser No. 1 ______________________________

Stitcher No. 2 ______________________________

Hand Sewer No. 1 ______________________________

Stitcher No. 3 ______________________________

Trimmer ______________________________

Stuffer ______________________________

Hand Sewer No. 2 ______________________________

Inspector ______________________________

PRODUCTION CARD

Suggested for use when working on controlled speed projects, these cards can be prepared only after a job analysis has been made. The card is fastened to each bundle as the material is cut. As each process is completed, the worker signs her name, fills in the date and the time spent on the process. The completed cards are then used by the teacher for grading and by the class for an evaluation of efficiency and selection of future projects.

PRODUCTION CARD FOR SCHOOL PILLOW

Production Steps	Name	Date	Time
1) Make pattern			
2) Cut-Mark			
3) Bundle-Tag			
4) Stitch quarters into half circles			
5) Press seams open			
6) Stitch half circles together			
7) Press seam open			
8) Decorate with hand stitch			
9) Stay stitch openings and stitch front and back together			
10) Trim seams and notch			
11) Turn pillow and stuff			
12) Hand stitch opening			
13) Inspect for flaws			

DAILY TIME CARD

(Used as a means of pupil evaluation of their own efficiency.)

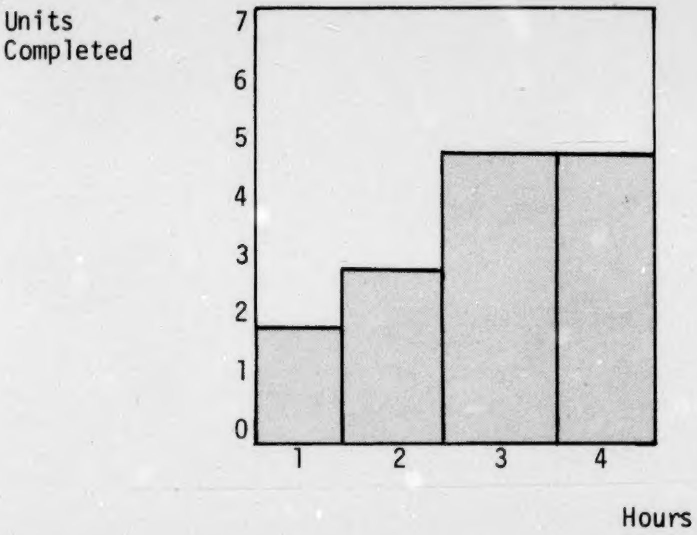
Name____________________________________ Date__________, 19__
(Last name first)

Job No.	Description	No. of pieces	Time

TASK PERFORMANCE CHART

TASK	Pattern Making	Marking	Cutting	Assembling	Bundling and Tagging	Stitching	Under-pressing	Hand Sewing	Inspecting	Finish Dressing
STUDENT'S NAME										

JANE DOE



TIME-SAVING TECHNIQUES

KEY IDEAS:

Quality control is maintained through inspection.

Accuracy, speed, and coordination of movements are essential in production sewing.

Skill and proficiency are increased through practice.

Earnings depend on skill in manipulating the work and on reducing time required to perform each operation.

Using time-saving techniques will increase speed.

WORDS TO KNOW:

production card
graph
quality control
production control
quota or standard
ticket system
coupons
get
dispose
pickup
method
cycle time
make up pay

Behavioral Objectives	Learning and Evaluation Experiences
List employee's actions which decrease production (C-K)	Brainstorm to identify things which may decrease one's production. Consider such things as long coffee breaks, neighborly visits, too-frequent trips to the ladies room, poor posture, failure to develop smooth sewing rhythm, having to grasp material after picking up or during sewing, inefficient use of hands, excessive handling of materials, poor machine set-up.
Explain effects of decreased production (C-C)	Discuss the following questions: How does decreased production cost the factory money? How does it cost the operator money?
Cite efficient techniques for handling materials (C-K)	Observe a demonstration showing how placement and handling of materials affects the sewing-machine operator's speed.
	View transparencies or charts showing the proper placement, pickup and alignment and disposal of materials. (See p. 205.)

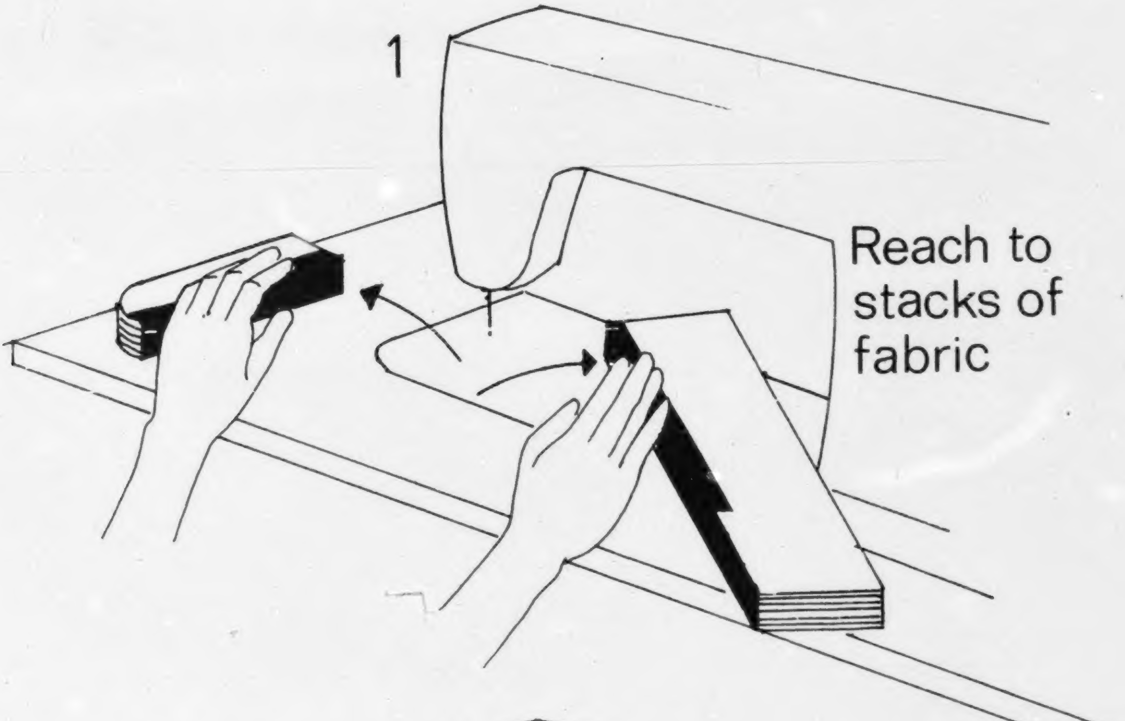
Behavioral Objectives	Learning and Evaluation Experiences
	View pictures of ways sewing machines can be set up to promote efficient handling of materials. Examples: adjustable machine height, adjustable chair height, correct placement of light for best vision, convenient location of power switch and thread stands, carefully planned size and shape of machine table, attachments which reduce work of operator, carefully planned facilities for getting work and for disposing of work.
Try to develop rhythm in performing an operation (P-GR)	Study positions for the pickup, alignment, and disposal of materials for a specific operation. Place materials in correct positions.
	Practice using designated positions to develop rhythm in work. Observe the following points: Try to make smooth, deliberate motions. Avoid jerky movements. Position work with minimum of handling. Sew from beginning of seam to end, making only designated stops. Sew as fast as possible at a constant speed from beginning to end. Strive for accuracy in stitching. Check work without undue handling. Obtain and dispose of work as quickly and accurately as possible.
Gain speed in performing sewing operations (P-M)	Use techniques such as the following to increase sewing speed: 1) Beat the clock; establish a time goal for completing a bundle; repeat. 2) Use a minute timer to determine how many operations can be performed per minute. 3) Set daily goals to beat. 4) Discuss ways to improve speed with teacher. 5) Complete several garments; see how long they take. 6) Work for prizes, praise, etc.
List reasons for increasing speed (C-K)	Brainstorm to cite reasons for increasing sewing speed. Consider increased earnings, recognition, benefits to employer.

Behavioral Objectives	Learning and Evaluation Experiences
Be willing to increase sewing speed (A-Res)	Look for ways to increase sewing speed voluntarily during assembly-line production unit.
Display interest in increasing sewing speed (A-V)	Plot your increases in sewing speed on a chart located near your work station. Express sense of pride in each increase. Accept the challenge to increase production by 10 percent or by 20 percent on a specific sewing project. Receive special recognition for accomplishing increase (e.g., picture on bulletin board, sign posted above work area). Work to increase sewing efficiency in each new project.
Define time-motion study (C-K)	Listen to a clothing-factory representative describe time and motion studies. Who usually makes time and motion studies in a garment factory? What procedures are used to conduct time and motion studies? What information is obtained from time and motion studies? How are time and motion studies used to reduce the time and effort required for an operation? How does this save money for the factory? How does it help the operator increase her pay? Why are operators expected to follow method results exactly? Can an operator suggest a change in the method? How?
Explain a time-motion study (C-C)	Look at an "analysis of operation" sheet. Explain information given on the "Method Sheet."
Apply time-motion study (C-Ap)	Participate in groups to brainstorm on ways to cut down construction time in a project.

Behavioral Objectives	Learning and Evaluation Experiences
	Make a list of every individual motion you go through in performing a specific task. Have someone time each motion with a stop watch. Repeat a number of times. Take an average of the time required to perform each motion. Total the time consumed by all motions, to find the total time required for the entire task.
Analyze the time-motion study technique (C-A)	Study the list of motions to see if you are making any unnecessary motions. Would changing the order of motions save time? Could you eliminate one or more motions? How may changing the way you get and dispose of materials, the addition of special attachments, or the way you handle the work increase your speed? How would those changes affect your paycheck?
	Solve the following problem: By examining each motion, an operator found that by eliminating wasted motions she could save 1 second per operation. Her supervisor approved the new procedure. The operator had been sewing 3000 seams each day. Each seam took 9 seconds to complete. She is paid 1/2 cent per operation. If she can save 1 second on each operation, how much more money would the operator earn in a day? How much more would she earn per hour? (See p. 217.)
Accept time-motion study technique (A-V)	Adopt ways to cut down on movement and construction time.
	Record class production. Note increases or decreases in production. What can affect production? Study your daily time card. Has your production increased? How does your work affect the class production? Are you using motion-saving techniques?

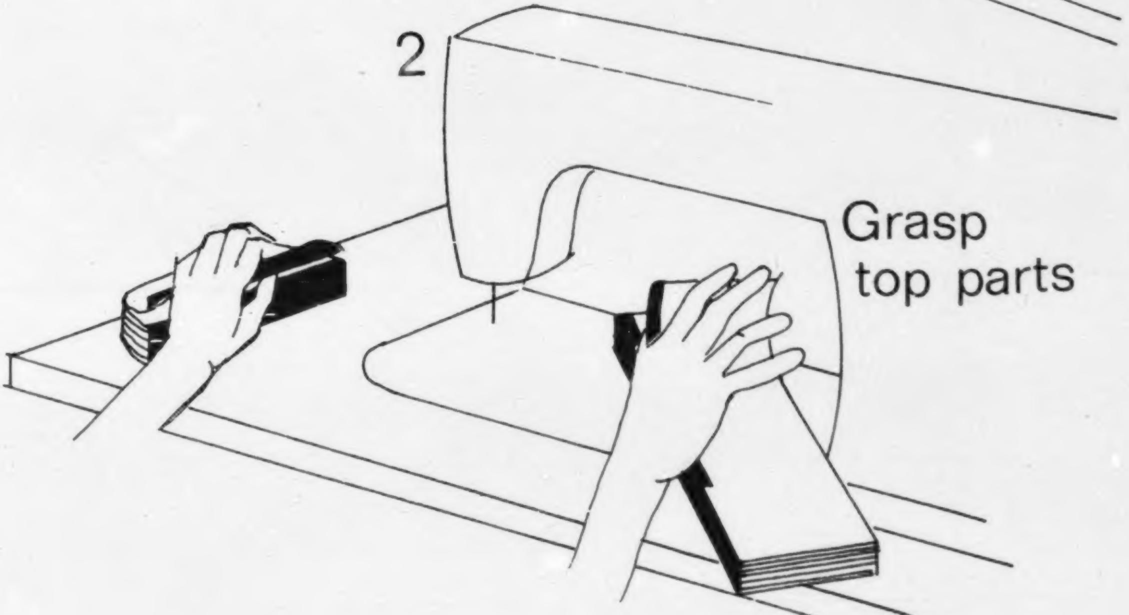
EXAMPLE OF GET AND DISPOSE

1



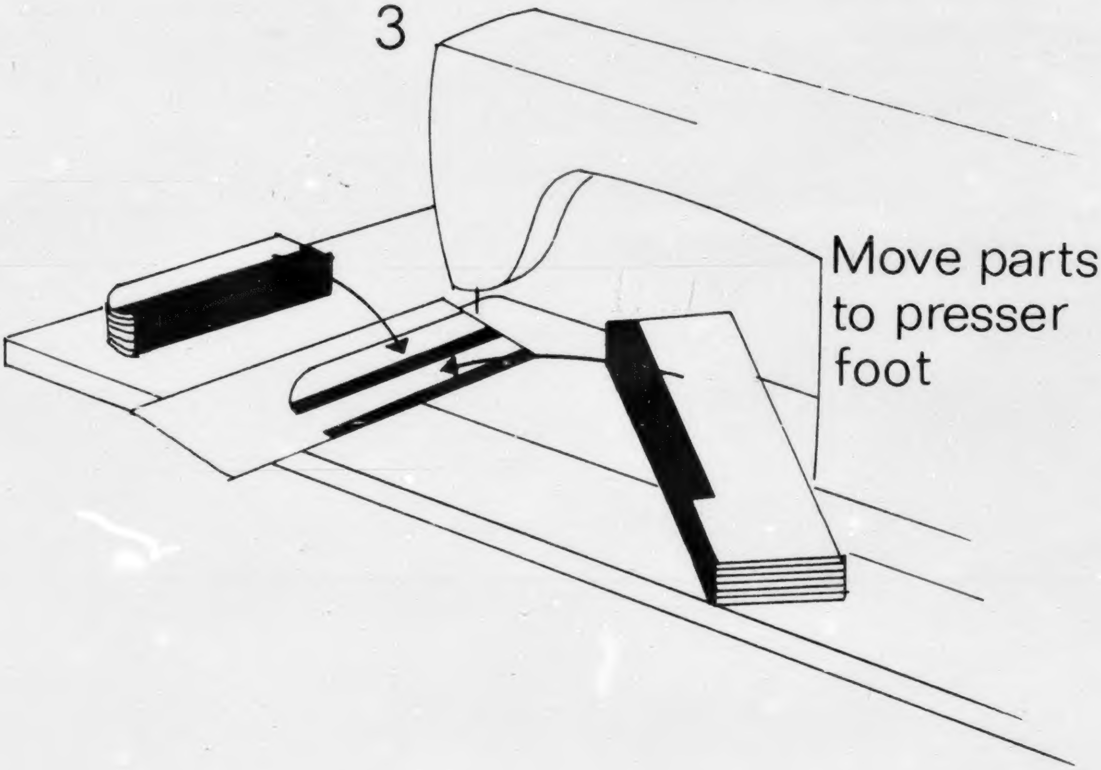
Reach to stacks of fabric

2



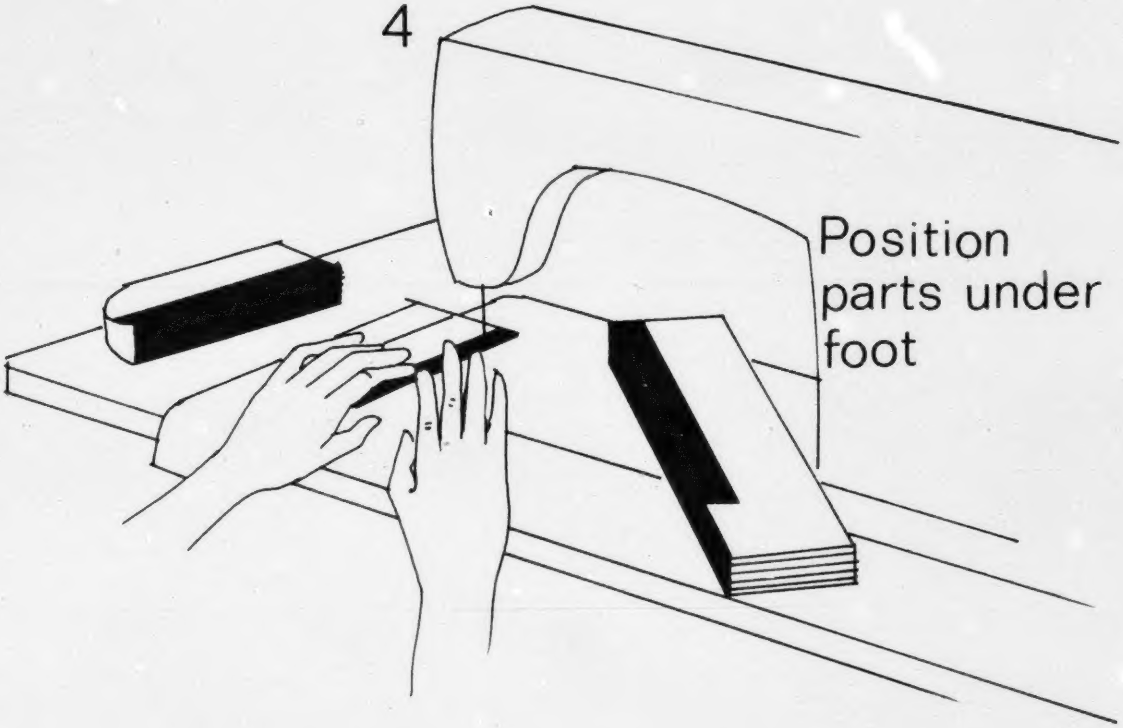
Grasp top parts

3



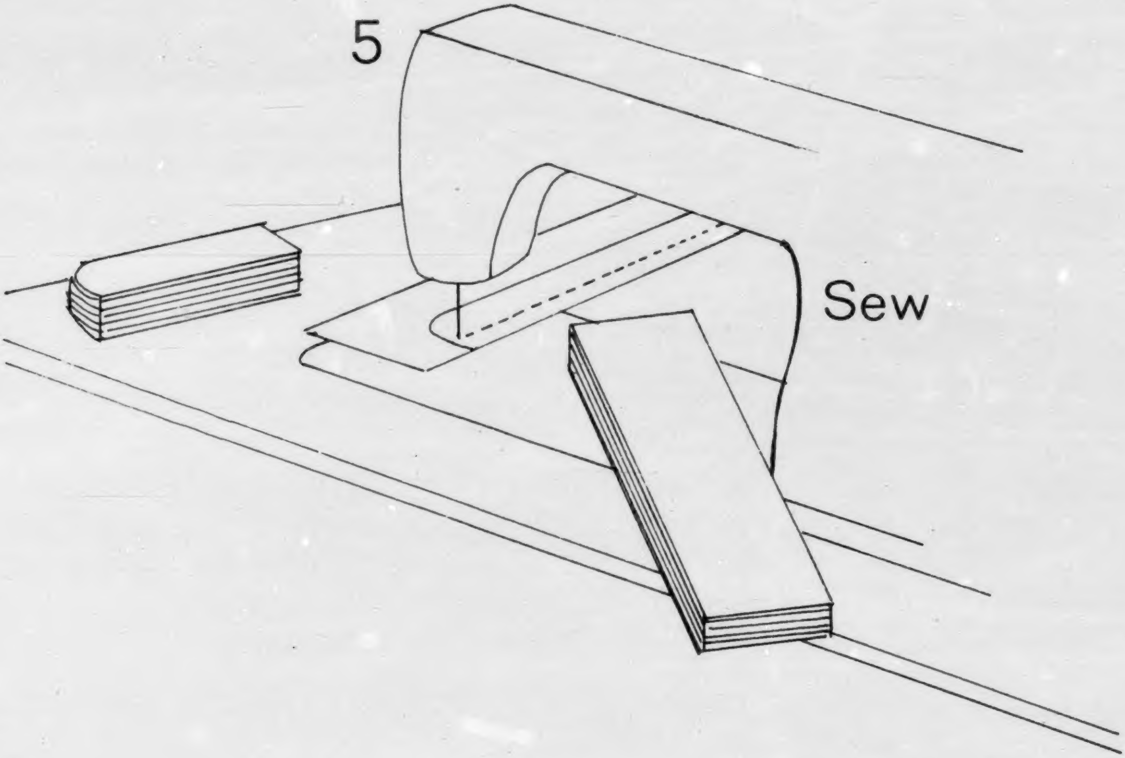
Move parts to presser foot

4

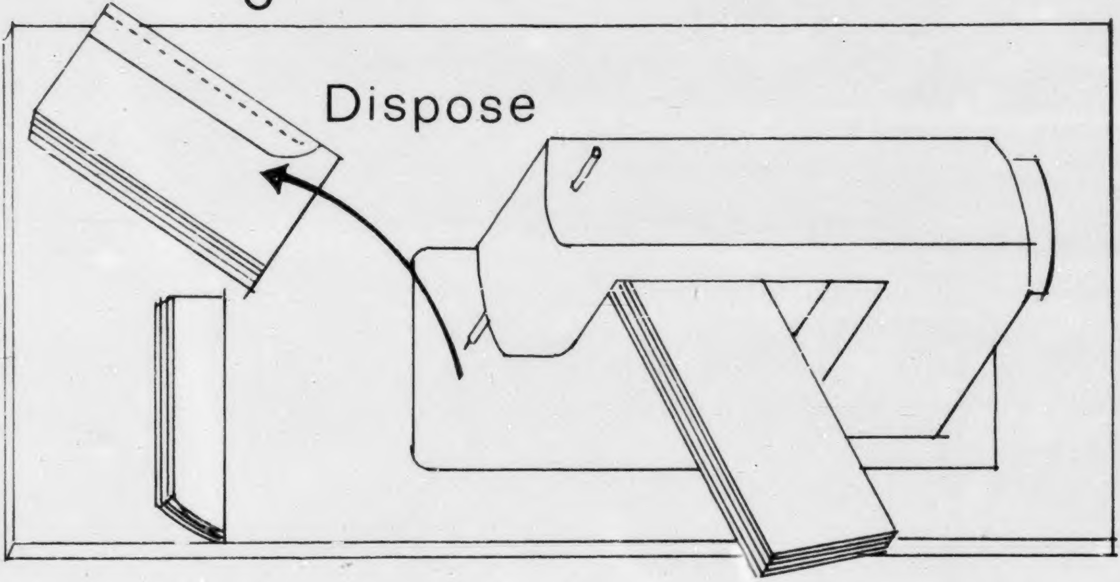


Position parts under foot

5



6



PROBLEM SOLUTION:

Sewing Operator Time:

8-hour work day
.5-hour break time (2-15 minute breaks)
7.5-hour actual work time

Information given:

3000 operations per day at 9 seconds per operation.
.005¢ per operation.

Solution:

60 minutes = 1 hour
1 minute = 60 seconds

Find total number of seconds in a 7.5-hour work day.

7.5 hours per day
x 60 minutes per hour
450.0 minutes per day worked

450 minutes per day
x 60 seconds per minute
27000 seconds per day worked

Operator performed 3000 operations at 9 seconds per operation.

3000 operations per day
x 9 seconds per operation
27000 seconds per day used.

If operator saved 1 second per operation, then it would take 8 seconds to perform each operation.

27000 second per day ÷ 8 seconds per operation = 3375 operations per day for 8 seconds each.

3000 operations X $.005 per operation = $15.00 a day for 3000 operations

3375 operations X $.005 per operation = $16.875 a day for 3375 operations

$16.875 earnings per day at 8 seconds per operation
-15.000 earnings per day at 9 seconds per operation
$ 1.875 more earnings per day by saving 1 second per operation

$16.875 ÷ 8 hours per day = $2.109 = $2.11 earnings per hour for 8-second operations

$15.000 ÷ 8 hours per day = $1.875 = $1.88 earnings per hour for 9-second operations

$2.11 earnings per hour at 8 second operations
-1.88 earnings per hour at 9 second operations
$0.23 more earnings per hour by saving one second per operation

CONCEPT: Alteration and Repair

JUSTIFICATION:

Skill in alteration and/or repair increases the scope of one's employment possibilities. This type of work may be part time as well as full time. Other than factories that do some repair work, department stores, dry cleaners and alteration shops offer employment possibilities to persons skilled in alteration and repair.

Even with limited skills, part-time work can usually be found in this area, and advancement is possible with further training and proven reliability.

OVERALL OBJECTIVES:

Determine for each situation the method of alteration which will result in professional-looking results (C-A)

Make alterations which incorporate workmanship equal to or better than original work in garment (P-M)

Exhibit loyalty to the employer (A-V)

Give evidence of desire to perfect skills necessary for garment alteration and repair (A-V)

TECHNIQUES

KEY IDEAS: Correctly marked tags result in more accurate alterations.

Alteration tags and marking serve as means of communication between the fitter and the alteration department.

Skill in using ripping devices is essential, in order to avoid cutting the fabric.

Garment repairs are an essential part of the work in alterations departments of dry cleaners and retail clothing stores.

Mending and repair stitches should be as inconspicuous as possible.

The life of garments can be extended through skillful pairs.

High quality hand stitches in alterations are expected by customers and employers.

WORDS TO KNOW:

ripping
razor knife
seam ripper
scissors
tags
symbols
markings
alter
alteration
stretch
space
shifting
seed stitch
whipping stitch
blanket stitch
padding stitch
buttonhole stitch
lacing
overcasting
alterations
backstitch
half-backstitch
catch stitch
blindstitch
felling
overcast stitch
stoating
lock stitch

Behavioral Objectives	Learning and Evaluation Experiences
Define alteration (C-K)	Brainstorm to determine what alteration means. Check the dictionary, if an answer is not agreed upon.
Give examples of alterations (C-C)	Give examples of ways in which students have altered clothes at home. Examples: shortened skirts and dresses; lengthened or shortened pants; let out seam allowances; set over buttons and hooks and eyes.

Behavioral Objectives	Learning and Evaluation Experiences
Determine alterations needed (C-An)	Describe the alterations needed by a garment modeled by a class member. Do class members agree? Are alterations permanent? Can all garments be altered to fit? Do men as well as women need clothing alterations?
Name tasks performed by an alterations employee (C-K)	Note during a field trip the physical layout of the alterations department and methods of measuring, marking, and altering used in a commercial establishment.
	Write down an example of the method for marking alterations observed during the field trip.
Identify tags, markings, and symbols used in clothing alterations (C-K)	View a transparency of alteration symbols, as instructor explains the meaning of each.
	Observe a demonstration on marking tags in alteration establishments.
	Use a sorting board (simple board with cup hooks) to determine if you can recognize alteration symbols. As the name of an alteration is given on a tape-recording, select the symbol from a group of diagrams and place it in order on the sorting board. After the board is filled, secure an answer sheet, and check your work. If you have one wrong, replay the tape, and find the correct symbol.
Interpret alterations markings on tags and garments (C-C)	Check markings and symbols on tags against the alteration symbols marked on garments. Are they the same? What would happen if the tag and the garment were marked differently?
Explain markings used by different establishments (C-C)	Give examples of markings observed on the field trip, and match them to the markings on a handout. What variations did you notice?

Behavioral Objectives	Learning and Evaluation Experiences
Demonstrate procedures for marking tags and garments for alteration (C-Ap)	Practice marking tags for alterations to different garments. Work in pairs. One marks tags and garments, and the other checks tags and garments with the handout sheet.
	Make a bulletin board using tags, markings, symbols, and marked illustrations of garment to show procedures used in tagging and marking garments for alteration.
	Use discarded garments to gain experience in marking tags and garments for alterations, by fitting the garments to a dress form to which body irregularity pads have been attached. Practice fitting and tagging garments needing alterations in bustline, bodice length, or waist and hip line.
	Role play situations, involving customers and make out tags, and record cards for customers' garments. Double check name, address, charges for alteration, and alteration information.
	Photograph garments on models before and after fitting and alteration are done. Use them later in evaluation or for bulletin-board displays.
Name ripping devices (C-K)	Observe equipment that is used for ripping out stitches, such as scissors, seam rippers, and razor knives.
Cite procedures for ripping out stitching with scissors (C-K)	View a demonstration on removing stitches with scissors. How far apart are the snipped threads? Are threads pulled from top or bottom?
Try ripping out stitches with scissors (P-GR)	Practice removing stitches with scissors. What difficulties are encountered?

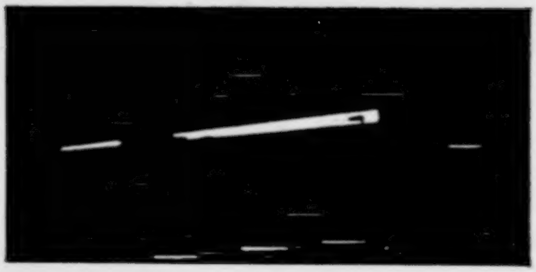
Behavioral Objectives	Learning and Evaluation Experiences
Cite procedures for using a seam ripper (C-K)	View a demonstration on removing stitches with seam ripper. How is the ripper held? How many stitches are ripped out at once?
Attempt removal of stitches with seam ripper (P-GR)	Practice removing stitches with seam ripper.
State procedures for removing stitches with a razor knife (C-K)	View a demonstration on removing stitches with a razor knife. Note: Do you aim it at the thread? Is the razor placed straight up and down or flat, next to the material?
Follow procedures for removing stitches with a razor knife (P-GR)	Practice removing stitches with a razor knife.
Explain how to rip out stitches (C-C)	Discuss steps involved in ripping out stitches, and give similarities and differences between the use of a seam ripper, a razor knife, and scissors.
Explain how to remove stitching with seam ripper, razor knife, and scissors (C-C)	Explain for the class the use of one of the ripping devices to remove stitching.
Identify stitches which need to be removed with a pin or needle (C-K)	Observe areas on ready-made garments, such as cloth-lipped buttonholes where stitches are very small and may have to be removed with a pin or needle.
State how to remove stitches with a pin or needle (C-K)	Observe a demonstration on removing stitches with a pin or needle. List steps in removing stitches with a pin or needle. How is damage to the area prevented?
Practice removing small stitches with a needle (P-GR)	Remove stitches from a bound buttonhole or the closed seam over a zipper, using a pin or needle.
Determine which ripping device is easiest for the user to manipulate (C-An)	Remove stitches in straight and curved seams on various fabrics using scissors, seam ripper, razor knife, and needle. Score each tool on ease of use and speed. On what was each ripping tool the most effective? When might each be used?

Behavioral Objectives	Learning and Evaluation Experiences
Determine which ripping device is the safest (C-An)	Discuss the safety of each tool. Rate each for safety.
Remove seams from ready-made garments (P-M)	Rip stitches from ready-made garment that needs altering, using ripping device best for fabric and user's ability.
Basic Repair Stitches	
Identify hand stitches used in clothing alterations (C-K)	Observe samples displayed on a chart or a chart or bulletin board of hand stitches used for clothing alterations. Recall the hand stitches previously learned. (See p. 54.)
	Observe a demonstration on executing hand stitches used in alterations. List steps in executing each stitch.
Explain which hand stitch is used for specific alterations (C-C)	Observe a display of garments which have been altered. Note the alteration which has been performed on each. Examine the garment to determine which hand stitches have been used in each situation.
Attempt hand stitches used in alterations (P-GR)	Practice hand stitches not previously learned.
	Practice each of the hand stitches to gain skill and speed in performing them.
	Take an objective test on hand stitches used in alterations.
Cite basic hand stitches used in garment repair (C-K)	Identify the following hand stitches which are also basic repair stitches, by naming them as they are shown on the overhead projector: running-, back-, blind-, slip-, catch-, felling-, overcasting-, buttonhole-, lock-, and stoating stitch.

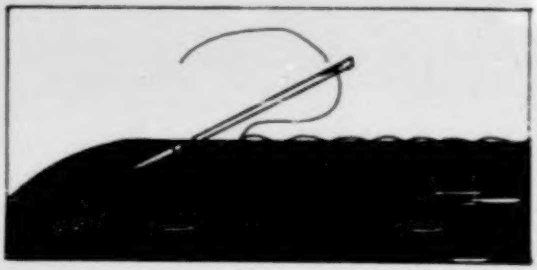
Behavioral Objectives	Learning and Evaluation Experiences
Name additional stitches used in the repair of garments (C-K)	Notice new stitches as they are shown on the overhead projector. Examples: seed stitch, whipping stitch, blanket stitch, lacing stitch and overhand stitch. (See p. 226.)
Identify hand stitches used in clothing repair (C-K)	Note on displayed garments hand stitches that have been used in altering and in repairing garments.
State how the additional repair stitches are made (C-K)	Observe a demonstration on repair stitches other than ones previously learned, and list methods of repair previously studied.
Describe how the repair stitches are used (C-C)	Discuss the uses of the repair stitches. Use samples of each stitch, and indicate on a garment where the stitch could be used.
Practice making repair stitches (P-GR)	Use repair stitches in making simple repairs.
Determine repair stitches to be used on damaged clothing (C-An)	Draw a number indicating which garment you are to inspect for repairs. Determine what repair needs to be made, and select from a pile of repair stitch illustrations the stitch to be used.
	Assess what you have learned about hand stitches, by taking a matching test on repair stitches. (See p. 227.)

Repair Stitches

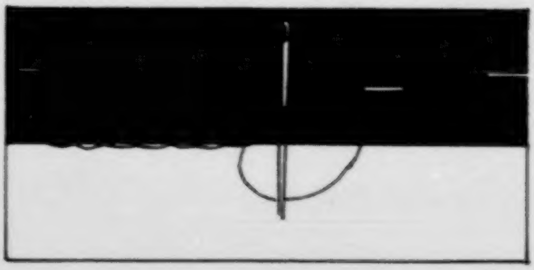
Seed stitch: A variation of the backstitch, in which only tiny stitches show on the right side. Used to repair zippers put in by hand, and in other places where appearance is important.



Whipping stitch: A good seam finish to protect cut edges against ordinary, but not excessive, fraying.

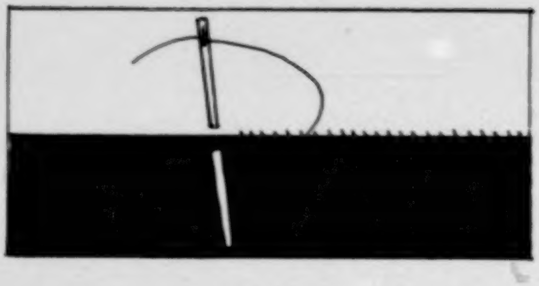


Blanket stitch: Size of stitch varies with use--large for edge finishing, very tiny for strengthening weak corners.



Lacing stitch: Can be used spaced, or very close for pulling two edges together temporarily or permanently. Spaced stitches help to restore shape to a damaged area before darning or applying a reinforcing patch.

Overhand stitch: Used to join two folded edges. Take stitches in the very edge of the folds as you hold the two edges together.



"A STITCH IN TIME"

Student Answer Sheet

Student Directions:

Match numbers of the garments placed around the room to the stitches which would be most suitable for use in repairing those garments.

Blanket Stitch 1.

Buttonhole Stitch 4.

Catch Stitch 3.

Seed Stitch 5.

Backstitch 5.

Padding Stitch 6.

Stitch Garment

________________ A

________________ B

________________ C

________________ D

________________ E

________________ F

____

Teacher Directions:

Make up the garment samples listed below. Place an arrow to indicate the area needing repair. Garment should be numbered to facilitate matching. Place the garments in different sections of the room, and begin by stationing one girl at each garment. Give students a limited time in which to match garment number and repair stitch. Call time, and have everyone rotate to next garment.

A. handstitched zipper needs repair

B. layers of cloth need to be handstitched before machine darning

C. a seam that is raveling badly needs an edge finish

D. hook and eye need to be replaced at waistline of skirt

E. broken top stitching on a pocket of lined garment needs to be restitched

F. garment with a section of blind hem out needs rehemming

GARMENT REPAIR

KEY IDEAS: Carefully made patches can make repairs almost invisible.

Life of garment can be increased through application of sturdy patches.

Garment repairs should be made neatly and inconspicuously.

WORDS TO KNOW:

- patch
- hemmed patch
- inset patch
- lapped patch
- knit patch
- blanket-stitch patch
- ravel
- trim
- darning
- weave
- frayed
- yarn
- twill or bias tape
- bar tacks
- widen seam
- pocket tip
- mouth of pocket
- pocket facings
- welt seam
- flat-fell seam
- French seam
- reinforce
- top stitch
- tucked
- extension
- edge of opening
- snap
- ball
- socket
- eye
- button
- buttonhole
- worked buttonhole
- thread eye
- overlap
- underlay
- closures
- overcast stitch
- buttonhole stitch
- placket
- buttonhole twist
- shank buttons
- sew-through buttons
- fan
- bar
- stayed buttons

Behavioral Objectives	Learning and Evaluation Experiences
Identify common types of patches (C-K)	Observe various kinds of patches, as illustrated on the handout sheet. Practice identifying types of patches. View illustrations on the overhead projector, on posters, or samples of fabric of the various kinds of patches.
Explain the uses of various patches (C-C)	Listen to an explanation of the uses of various patches. Give an example of occasions when the patch illustrated on a card should be used.

Behavioral Objectives	Learning and Evaluation Experiences
Cite steps in patching a garment (C-K)	Watch a demonstration on the steps used in a hemmed patch and an inset patch. Study guide for making hemmed and inset patches. (See pp. 238-240.)
Practice the steps used in making patches, using appropriate hand and machine stitches (P-GR)	Practice the steps used in making a hemmed and an inset patch, using hand stitches and machine stitching.
	Repair clothing or toys collected by a service organization. This would make an excellent community service project for HERO-FHA.
	Bring garments to class to mend for yourself or someone else. Check the time spent in mending each garment. What charge would be appropriate for this work in your community?
Determine if correct techniques were used in producing the patches (C-An)	Display finished patches on table with a number on each. Point out good and bad qualities of one of the patches.
Develop standards for finished patch or darn (C-S)	Work in groups to develop standards for a finished patch or darn. As a class, use the standards to make a check sheet for use in evaluating completed patches and darns.
	Take a test on the step-by-step procedures for hemmed and inset patches.
	Obtain from the teacher examples of each step in making hemmed or inset patches, and sort them into proper sequences.
	Compare the time, cost, and appearance of machine- and hand-applied patches.
Name methods of darning fabrics (C-K)	Observe a display of various types of darning on different fabrics, including 1) plain hand darn, 2) machine darn, 3) pattern darn.

Behavioral Objectives	Learning and Evaluation Experiences
	Watch a demonstration on correct methods for darning various fabrics.
Find examples of methods of darning used in specific situations (C-C)	View a display of garments which have been darned. Note the method used in each situation.
Practice darning on various fabrics, using correct methods (P-GR)	Practice using demonstrated methods to darn scraps that have been burned, torn, or cut.
	Take a performance test on steps for making a machine darn.
Gain speed and accuracy in darning various fabrics (P-M)	Darn various articles of clothing to gain speed and accuracy in use of methods of darning. Garments might be obtained from a children's home, hospital, or nursing home.
	Hold a contest to determine the "Best Darned" garment. Judge according to appropriateness of method and finished appearance.
Cite reasons for rips in new garments (C-K)	Brainstorm to determine why seams might be ripped in new garments.
Explain why repairs must be professional-looking (C-C)	Role play an episode involving a saleslady and a customer, using sample garments collected by the entire class. As a garment is tried on, the customer notices a ripped seam. Give examples of the customer's reaction.
Name ways to repair rips (C-K)	Observe a demonstration of rip repairs accomplished by hand and machine. When would a hand stitch be necessary? How is thread matched?
Practice rip repair on sample garment (P-GR)	Select proper shade of thread for repair. How much darker than garments should thread be? How is thread selected for a print?
	Duplicate procedures indicated by instructor for repairing a ripped seam.

Behavioral Objectives	Learning and Evaluation Experiences
Gain speed in repairing minor rips (P-M)	Repair rips in garments that have been collected for welfare distribution. Each time you repair a rip try to increase your speed without sacrificing quality.
Volunteer to make emergency repairs (A-Res)	Agree to repair rips that occur in students' clothes during school hours.
Identify methods of seam reinforcement (C-K)	Look at labeled samples of the five basic methods of seam reinforcement. Name the method of seam reinforcement described, as the instructor reads descriptions of various methods.
Describe methods of seam reinforcement (C-C)	Use samples illustrating seam reinforcement, and explain how each method accomplishes its task of reinforcing a seam.
Employ each method of seam reinforcement on sample fabric (C-Ap)	Follow instructions provided by teacher for making a sample of each type of seam reinforcement.
Identify ticket for repairing pockets (C-C)	Examine a sample repair ticket for pockets, noticing the method used when no symbol is used.
Explain pocket repair instructions written on tickets (C-K)	Choose a ticket from a group of repair tickets. Explain what pocket repair is indicated on the ticket.
Prepare a ticket for a pocket repair (C-Ap)	Fill in a repair ticket for each of the following: replacing a half-pocket, replacing the entire pocket, and reversing a worn facing.
Name the parts of the pocket (C-K)	Identify terms and definitions used in pocket replacement. Find the term on the handout, and find its location on an actual pocket. (See p. 241.)
List steps in replacing a half-pocket (C-K)	View a step-by-step demonstration on replacing a half-pocket. Find each step on the handout sheet. (See p. 242.) Ask questions to clarify the procedure for replacing a half-pocket. Explain each step in your own words.

Behavioral Objectives	Learning and Evaluation Experiences
Try making a half-pocket replacement (P-GR)	Perform each step in replacing a half-pocket after your instructor has shown you that step. Watch a demonstration of each step; then try it until you have replaced the pocket.
Analyze performance on replacing a half-pocket (C-An)	Examine the construction of a half-pocket. Compare your pocket with others. Rate your replacement of half-pocket, using a score card.
Identify worn pocket facings (C-K)	Examine a pair of trousers with worn pocket facings.
Cite techniques for reversing worn pocket facings (C-K)	Watch a demonstration on repairing worn pocket facings. Note the following steps: ripping out facing; reversing facing; reseaming the facing. Find the description of each step on the handout. (See p. 245.) Are facings replaced before or after new pockets are sewn in?
Describe each step in reversing pocket facings (C-C)	Confirm your understanding of each step in reversing pocket facings by describing them to the teacher.
Attempt pocket-facing reversal (P-GR)	Follow the steps for pocket facing reversal. Have the instructor check each step as you complete it.
Acquire speed and accuracy in pocket-facing repair (P-M)	Perform pocket-facing reversals on trousers brought from home or on those collected for welfare distribution.
Name the steps in replacing the entire pocket (C-K)	Watch a demonstration on replacing the entire pocket. Find the description of each step on the handout. (See p. 244.)
	Name the steps in the replacement of a pocket, using circular response. Sitting in a circle, the first person names the first step; the next person names the second step, and so on around the circle. A person who cannot name or who incorrectly names the next step must leave the circle.

Behavioral Objectives	Learning and Evaluation Experiences
Attempt a pocket replacement (P-GR)	Prepare a replacement pocket, using one side section of old trousers. Follow steps given in the demonstration.
Complete replacement of an entire pocket (P-M)	Use procedures for replacing pockets on garments brought in for alterations. Try to replace the pockets without referring to the list of steps. Work to increase your speed and accuracy each time you replace a pocket.
Explain steps in repairing and replacing pockets (A-C)	Review, and take a matching test on repairing and replacing pockets. (See p. 246.)
Analyze performance in replacing a pocket (C-An)	Examine each replaced pocket. Discuss good and poor characteristics of each. Pick out three or four samples to be placed on display.
Identify zipper parts (C-K)	View a transparency of a zipper. (See p. 247.) Observe the labels of each part shown on numbered overlays. Name the zipper parts when the overlays are removed.
Give examples of different types of zippers (C-C)	Illustrate zipper types and their uses by placing examples on the bulletin board. Discuss differences between lightweight and heavyduty zippers, nylon and metal teeth zippers, zippers of different length, and exposed and covered zippers. Give examples of appropriate uses for each.
Cite causes of zipper damage (C-K)	Brainstorm to determine reasons for damage to zippers. Consider laundry and dry cleaning methods, faulty zippers, and misuse.
Note the need for zipper repair (C-K)	Examine the zipper in a pair of men's trousers. Are there any broken stitches? Has the trouser front pulled loose from the waistband? Is it the actual zipper that is damaged? Does it need to be replaced?

Behavioral Objectives	Learning and Evaluation Experiences
Name methods of zipper repair (C-K)	Note the steps as the instructor demonstrates methods of repairing the zipper in the fly of men's trousers.
Carry out fly repair (P-GR)	Locate a pair of trousers which need repair where the zipper is sewn to the fly. What type of repair is needed? Practice fly repair as the teacher supervises each step.
List procedures for replacing zippers (C-K)	Observe a demonstration on zipper replacement (See p. 248.) Why was instructor careful to note how the zipper was originally put in? Is the seam allowance basted? Why is the basting removed? Why are the pins placed diagonally? Do you stitch over pins? Do you have to change to a zipper foot? Why is the zipper opened a short way when you are stitching at the top?
Practice replacing a zipper (P-GR)	Select examples of all types of zipper replacement. Locate the garment, indicated by the number you draw, and decide what procedures should be used in replacing the zipper. Try replacing a zipper. Ask questions to clarify any steps about which you are uncertain.
Acquire skill in replacing zippers in different garments (P-M)	Use garments such as those collected for welfare to gain skill in replacing zippers.
Name the fasteners used in clothing construction (C-K)	Brainstorm to identify the different kinds of fasteners used on garments. Give the uses of fasteners, including snaps, hooks and eyes, and buttons.
Identify buttons that have been properly attached to articles of clothing (C-K)	View transparencies on application of flat-, metal- and plastic-shank-, removable shank-, and stayed-buttons. (See p. 249.) Is any type of button actually sewn flat to a garment? Have you used these methods before?

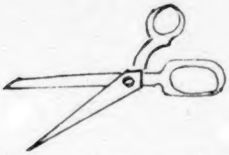
Behavioral Objectives	Learning and Evaluation Experiences
List procedures for attaching buttons (C-K)	View a demonstration on attaching the types of buttons listed. (See p. 250.) What suggestions did the instructor give that apply to sewing all types of buttons? Describe properly applied buttons.
Practice using correct techniques for attaching buttons (P-GR)	Follow directions given in the demonstration, and apply each type of button.
Construct a project which has button closures (P-M)	Gain speed in sewing button closures on projects such as children's "How to Do" books.
	Replace buttons on garments laundered in class or on garments collected for welfare.
Cite procedures for snap application (C-K)	Notice each step as instructor demonstrates procedure for applying snaps (See p. 251.) Which section of the snap is sewn on the overlap? When it is moved from one hole to the next, why does the needle have to pass under the snap? Should you sew all the way through the hole and fabric when attaching the snap to the overlap?
Carry out the steps in snap application (P-GR)	Choose correct snap size for the garment on which a snap is to be replaced.
Acquire skill in replacing snaps (P-M)	Practice the steps demonstrated for snap application by replacing a snap on a garment or on fabric sample.
Determine whether a snap is properly applied to the garment (C-An)	Exchange garments with a classmate. Rate correctness of snap applications, using a check sheet.
Identify hook and eye closures (C-K)	View samples of hook and eye closures. Note labels indicating hook sizes and eye types. Listen to information on the selection of hook size and eye type.

Behavioral Objectives	Learning and Evaluation Experiences
Explain when various sizes of hooks and eyes would be used (C-C)	Illustrate the correct size of hook and eye to use on fabrics of different weights.
Name steps in sewing hooks and eyes to garments (C-K)	Watch a demonstration on application of hooks and eyes. (See p. 251.) What stitch is used? How are hooks and eyes positioned? How are they held in place?
Explain the use of straight-bar eye and round eye (C-C)	Describe the use of straight-bar eye on edges that overlap and round eye on edges that just meet.
Practice proper application of hooks and eyes (P-GR)	Decide on size of hook and eye and type of eye to use for replacing a hook and eye closure on a specific garment.
	Carry out the steps in sewing on hooks and eyes. Practice until you feel confident that you can attach hooks and eyes quickly and neatly.
Gain skill in applying hooks and eyes (P-M)	Apply hooks and eyes to projects completed in class, such as children's "How to Do" books, and garments.
	Replace hooks and eyes on your own garments, garments laundered in class, or garments collected for welfare.

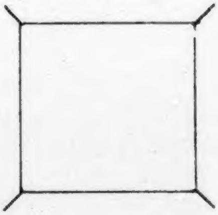
Hemmed Patch

To make a hemmed patch, follow these steps:

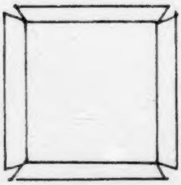
1. Mark smallest possible square or rectangle that will remove damaged areas.



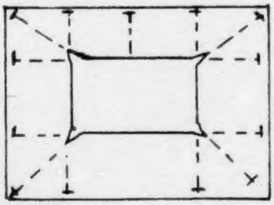
2. Cut along lengthwise and crosswise yarns.



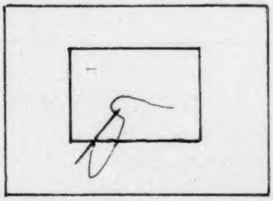
3. Clip each corner of the hole diagonally about 1/4-inch deep.



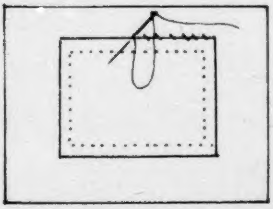
4. Turn under slightly beyond ends of these clips. Crease sharply, or press. Take care not to stretch the material if you crease instead of press.



5. Slide patch under hole until pattern matches. Pin in place; then cut patch about 1 inch larger than the hole on all four sides.



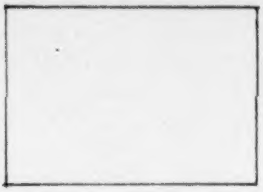
6. Baste patch in place. On outside of garment, hem with fine running stitches. Stitch closely at the corners of garment. Let stitches catch in very edge of opening.



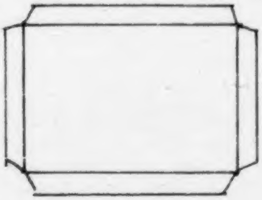
7. Turn edge of patch under about 1/4 inch on inside of garments made of light-weight and washable materials. Snip out bulk. Baste, and hem invisibly to garment. In thick materials, catch-stitch edges of patch to garment; or pink edges of patch, and seed-stitch in place. Choose the stitch that best suits your material, but make stitch as inconspicuous as possible on the right side.

Inset Patch

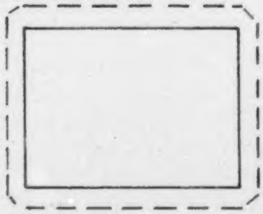
To make an inset patch, follow these steps:



1. Cut out damaged place on grain of goods to form square or rectangle as required.

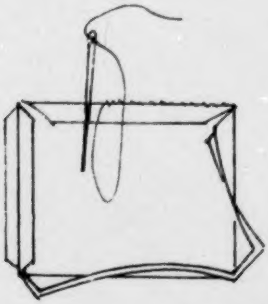


2. Clip corners diagonally--about 1/4 inch deep. Turn edges under just a little beyond the ends of clips and with grain of goods. Press.

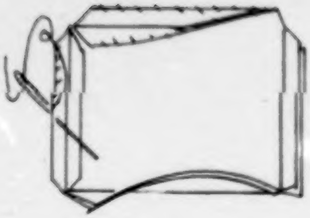


3. Match patch piece to hole, and pin or baste to hold patch in place.

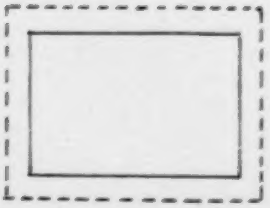
4. With white silk thread, slip-stitch folded edges of the hole to patch piece, catching very edge of folds with stitches about 1/2 inch apart; then slip stitch at each corner.



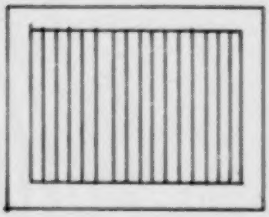
5. Turn garment inside out. Stitch patch in by hand with overhand stitch, or stitch by machine, following the fold lines and the white thread of slip stitches. Begin machine stitching midway on one side; stop at each corner; with needle down in fabric raise presser foot, turn, and continue around each patch. Then remove white thread.



6 a. In clothes that receive light wear, the seams at this patch may be pressed open to be less noticeable. Overcast edges to prevent fraying.

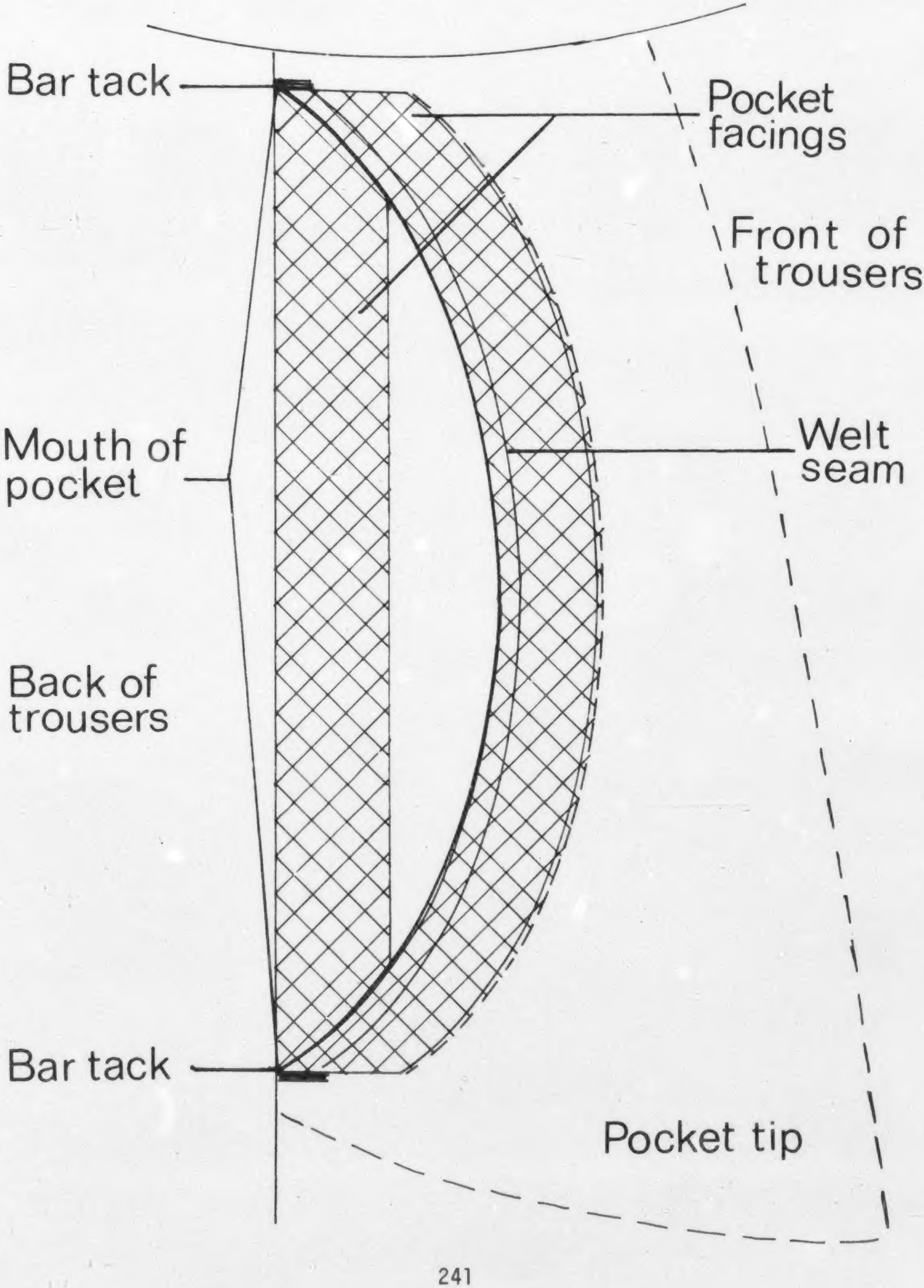


6 b. In utility clothes in which service is important, press seam toward garments; then topstitch on right side. This holds seam flat inside the garment.

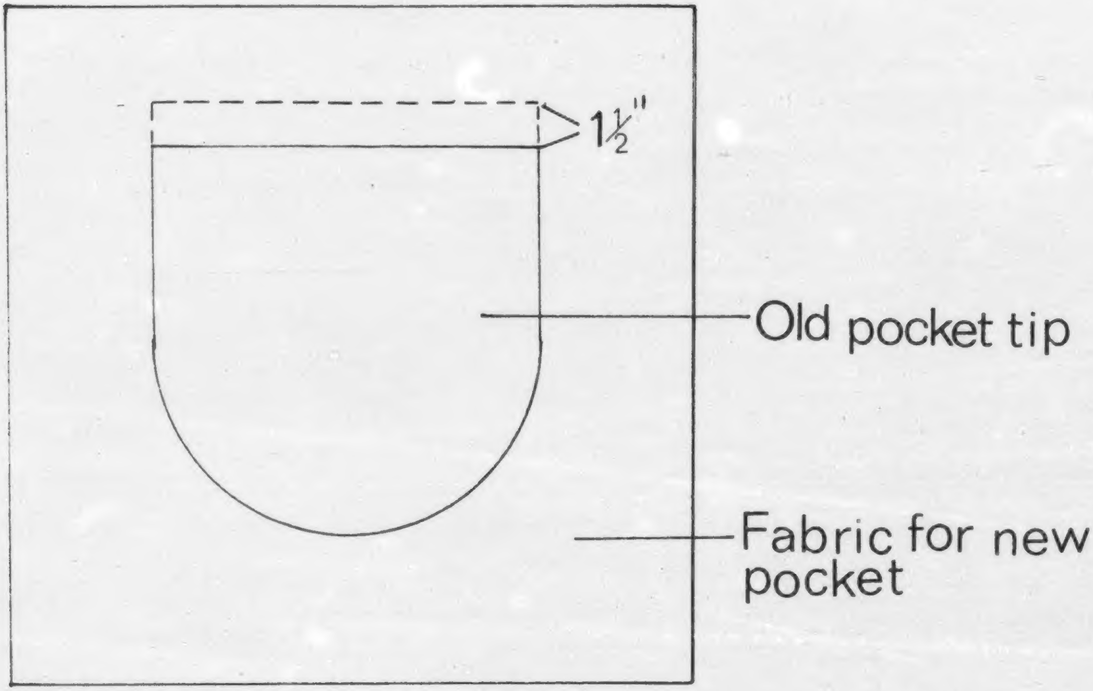


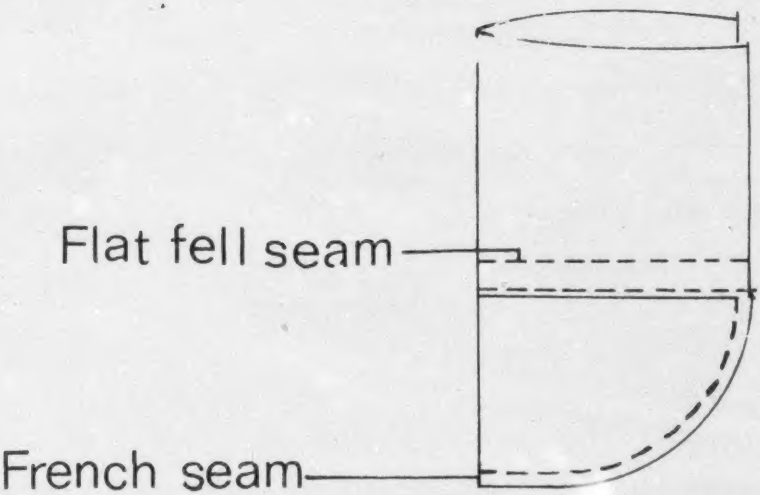
6 c. In thick fabrics--corduroy or heavy suiting--cut the patch piece just to fit the hole. Back it with a piece of light-weight press-on interfacing fabric that is about 1/2 inch longer on all sides than the opening; then machine stitch back and forth over the cut edges and, in the case of corduroy, between the ribbs.

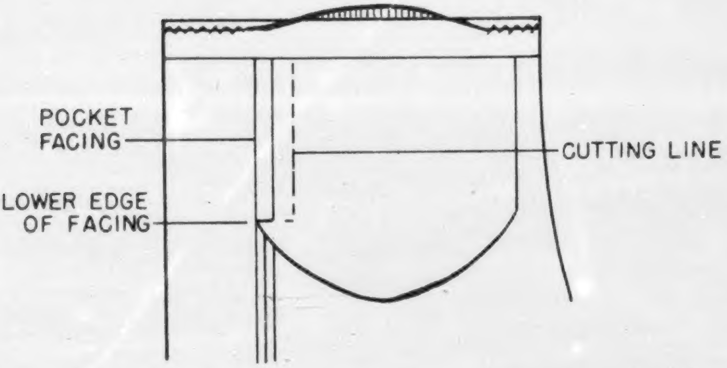
POCKET REPLACEMENT

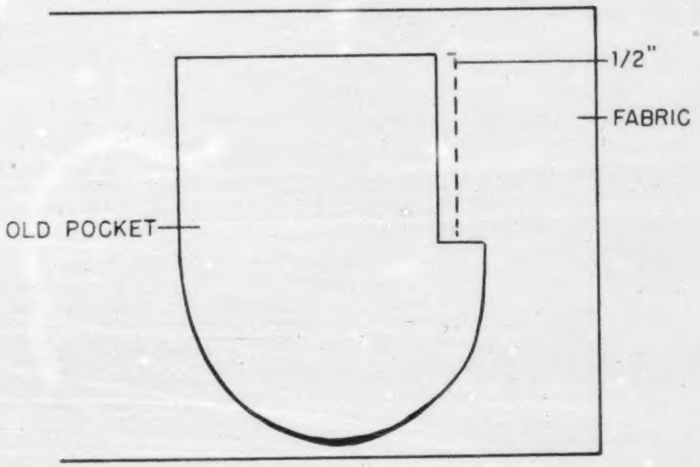

Bar tack
Pocket facings
Front of trousers
Mouth of pocket
Welt seam
Back of trousers
Bar tack
Pocket tip

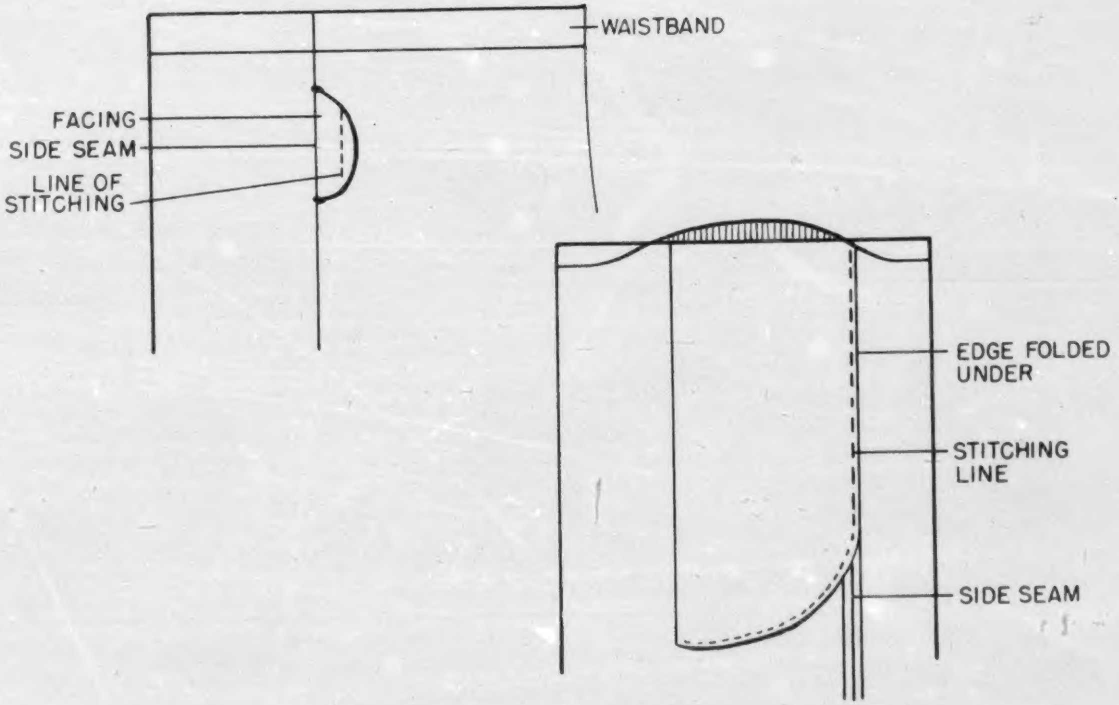
Replacing a Half-Pocket

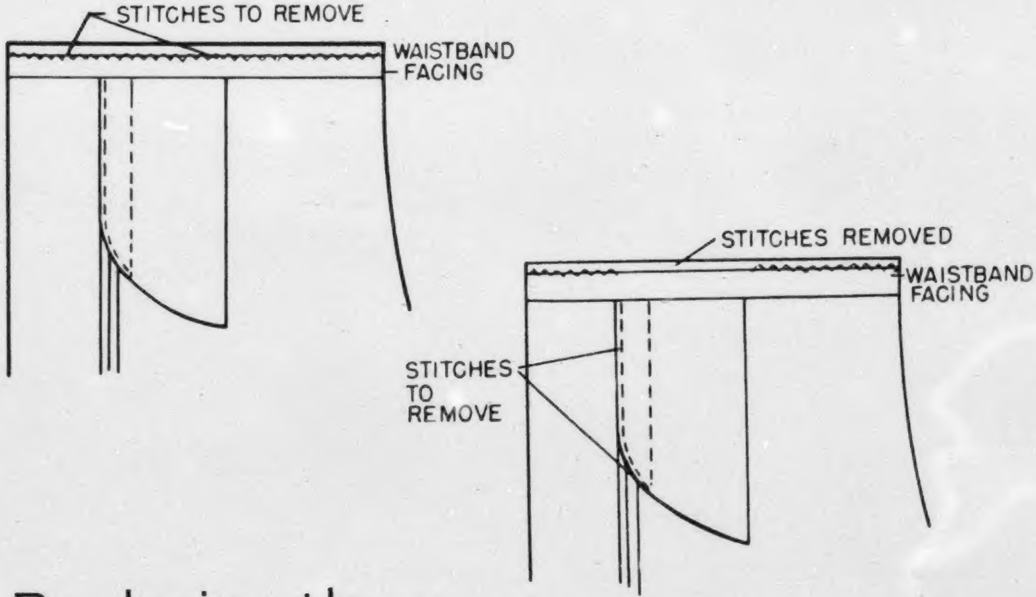

1½"
Old pocket tip
Fabric for new pocket


Flat fell seam
French seam

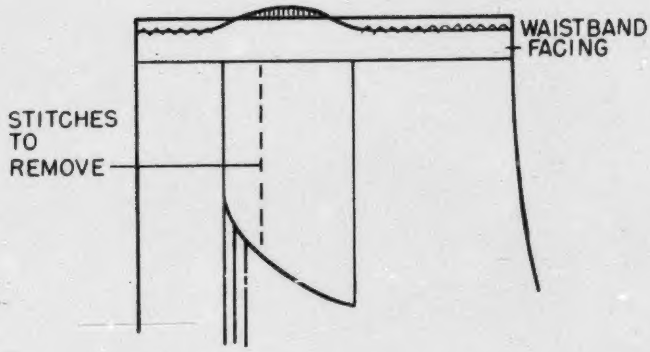

POCKET FACING
CUTTING LINE
LOWER EDGE OF FACING

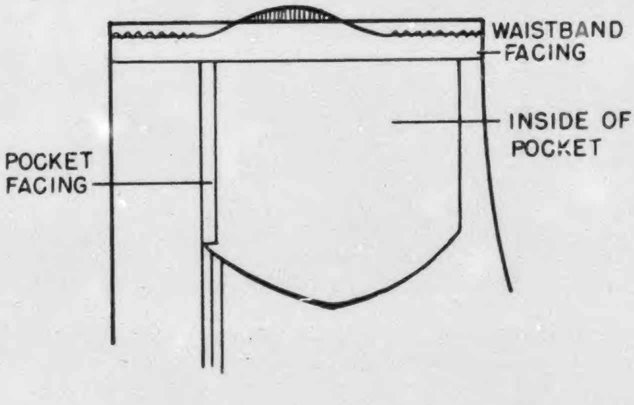

1/2"
FABRIC
OLD POCKET


WAISTBAND
FACING
SIDE SEAM
LINE OF STITCHING
EDGE FOLDED UNDER
STITCHING LINE
SIDE SEAM

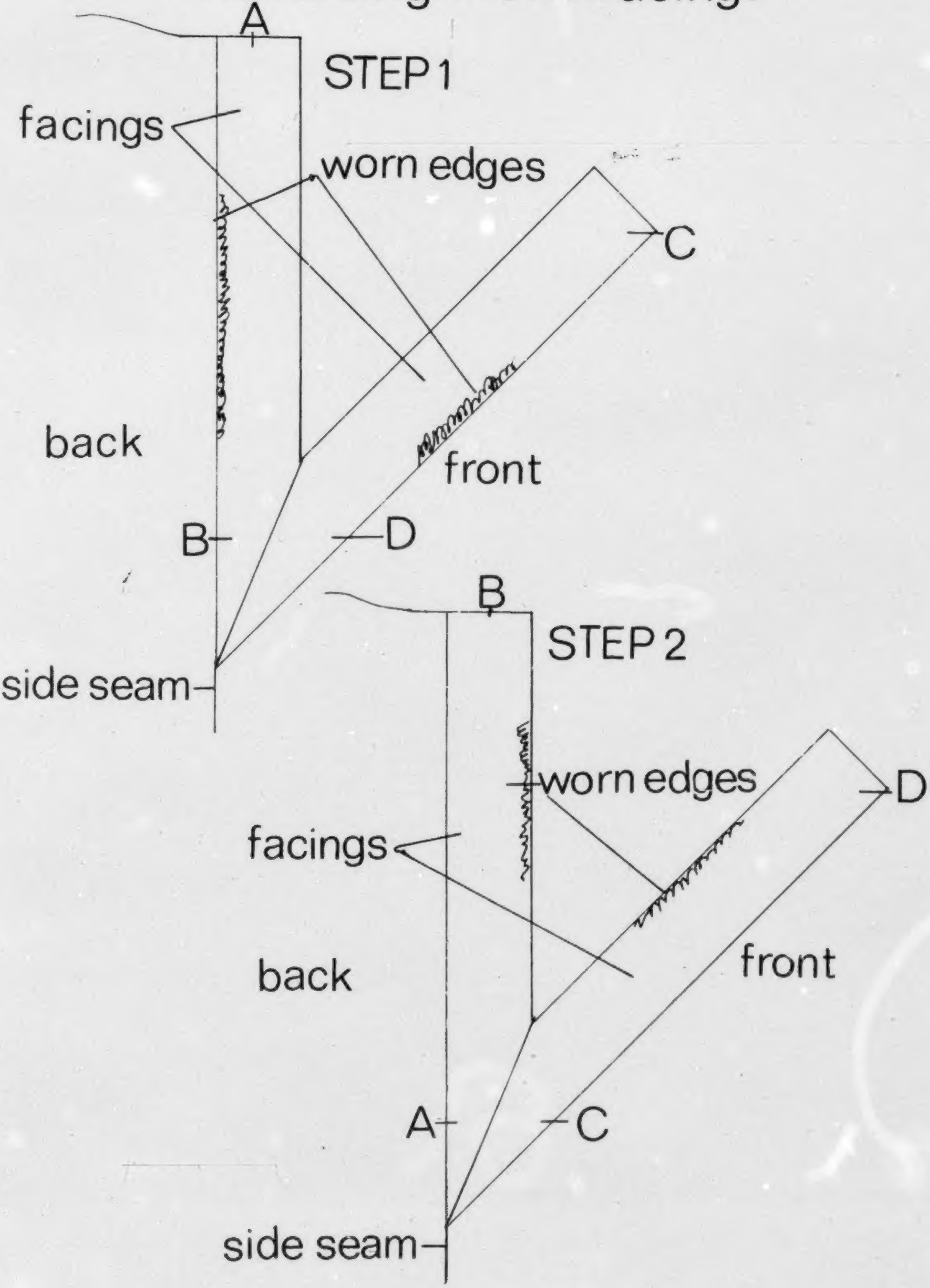

STITCHES TO REMOVE
WAISTBAND
FACING
STITCHES REMOVED
WAISTBAND
FACING
STITCHES TO REMOVE

Replacing the Entire Pocket


WAISTBAND
FACING
STITCHES TO REMOVE


WAISTBAND
FACING
INSIDE OF POCKET
POCKET FACING

Reversing Worn Facings


A
STEP 1
facings
worn edges
C
back
front
B
D
side seam
B
STEP 2
worn edges
D
facings
back
front
A
C
side seam

POCKET REPAIR QUIZ

Student Directions:

Use the sample pocket given to you by the instructor. Place the cassette in the tape player. After the first term is given, turn off the recorder, and pin the tag with number "1" to that section of the sample pocket. Turn on the tape player to hear the second term, and pin the tag with the number "2". Continue until all the terms are given.

Teacher Instructions:

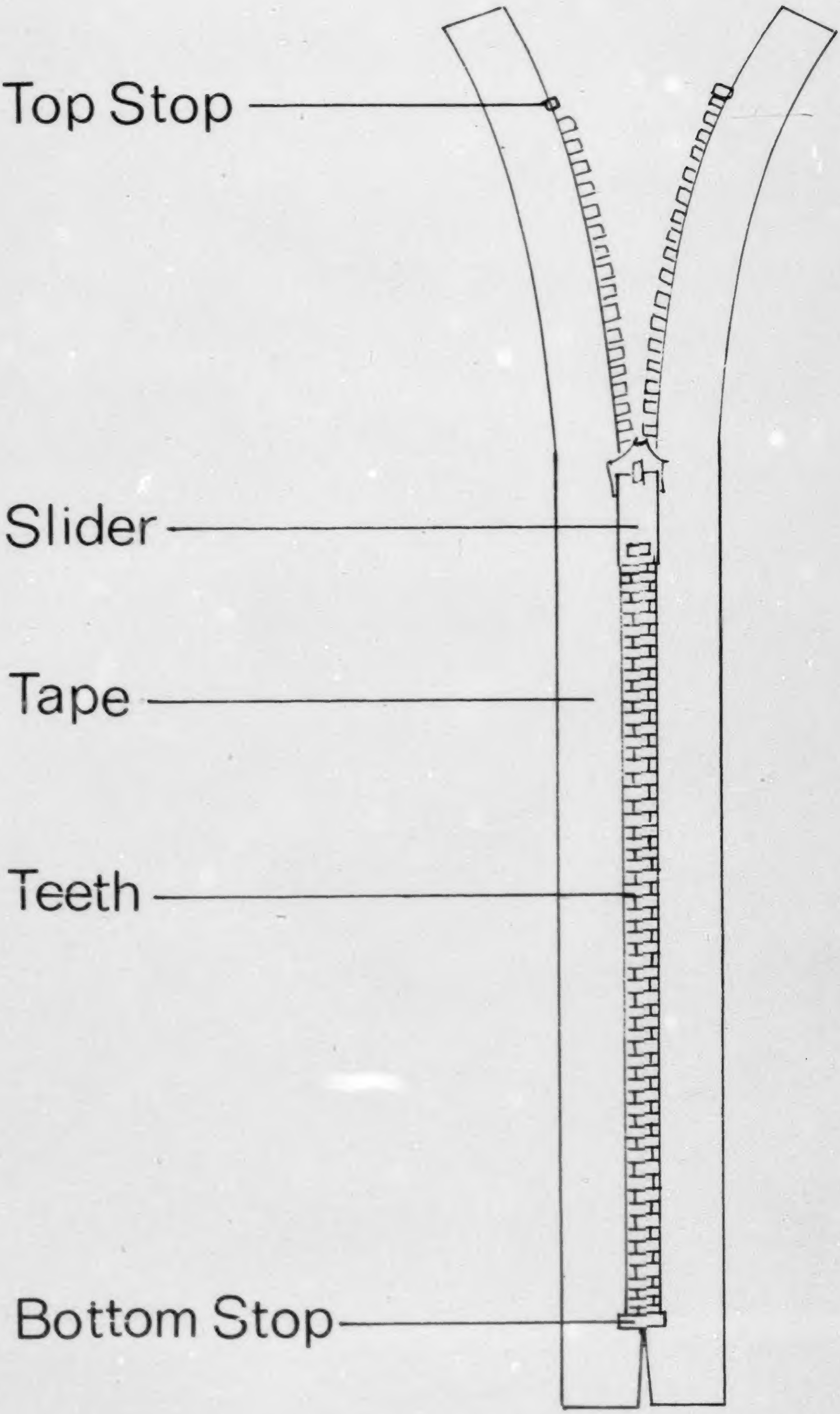
Tape the following terms at 10-second intervals:

Number 1 - Bar tack
Number 2 - Flat-felled seam
Number 3 - French seam
Number 4 - Mount of pocket
Number 5 - Pocket facing
Number 6 - Pocket tip
Number 7 - Welt seam of pocket

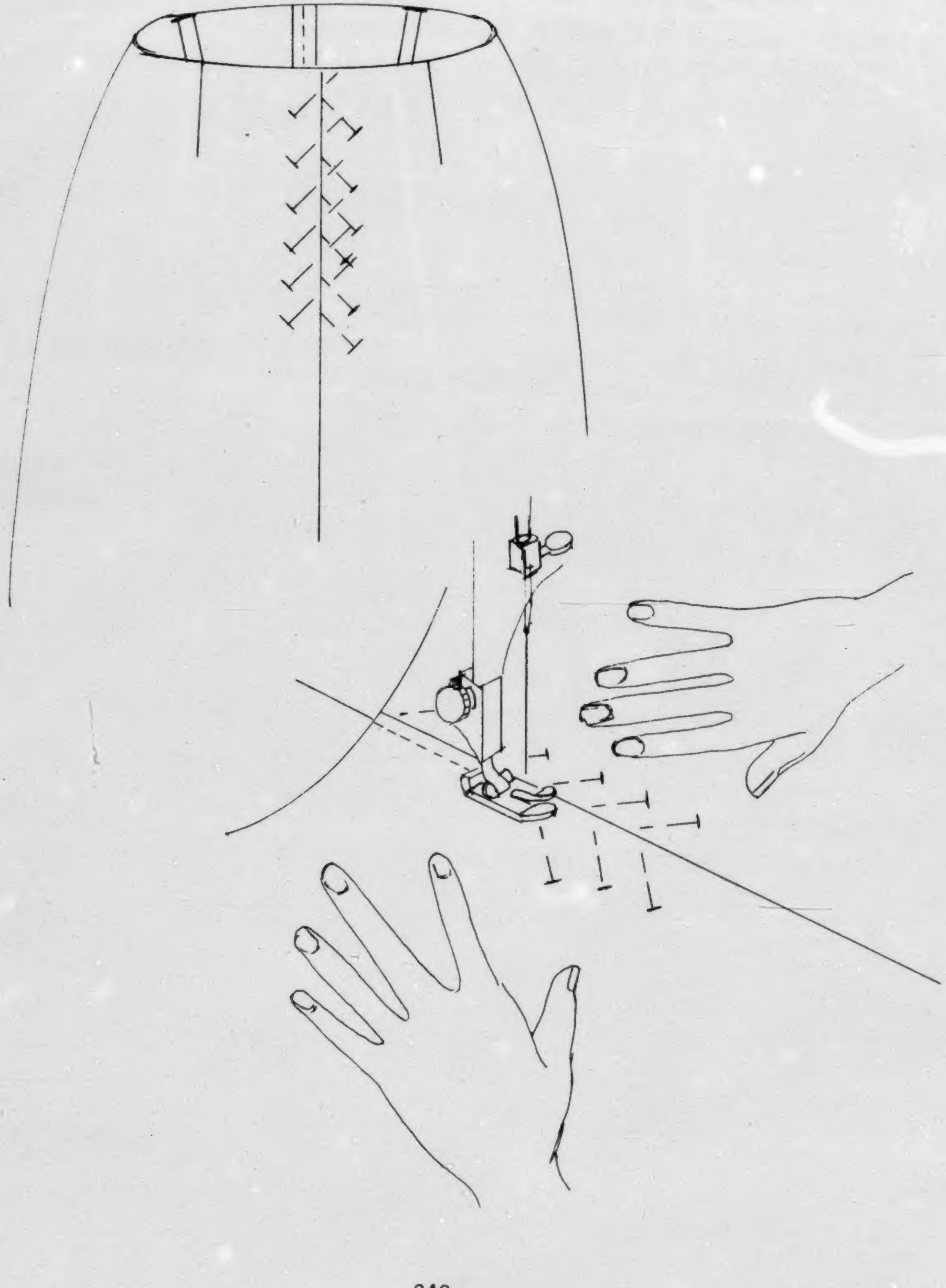
Have a pair of trousers with a half-pocket replacement already completed available for the student to tag with a number to indicate each pocket part. Make small tags, and number them from 1 to 7.

Use the following key to check the student's work:

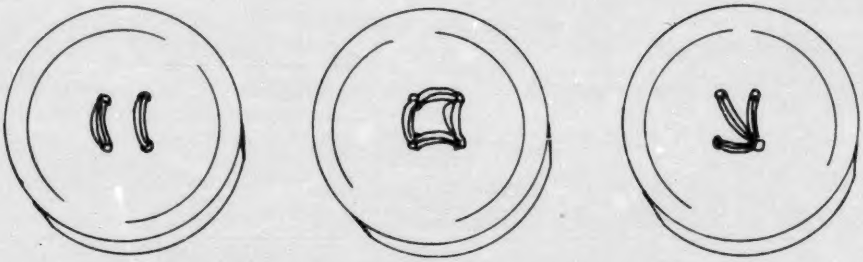
1. The stitching at the top and bottom of the pocket mouth.
2. The seam used to attach the half pocket to what is left of the original pocket.
3. The seam at the bottom of the pocket.
4. Opening of the pocket.
5. Facings located at the mouth of the pocket.
6. Bottom part of the pocket.
7. Topstitched seam at the top of the mouth of the pocket.


Top Stop
Slider
Tape
Teeth
Bottom Stop

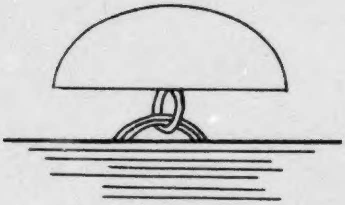
Commercial Method of Reinserting a Zipper

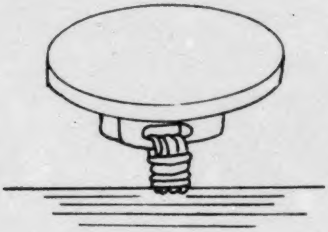


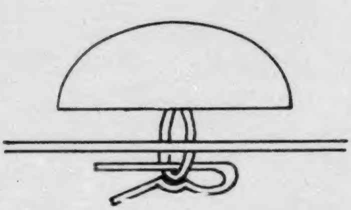
TYPES OF BUTTONS

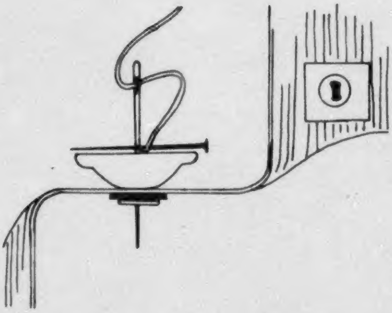

Sew-through

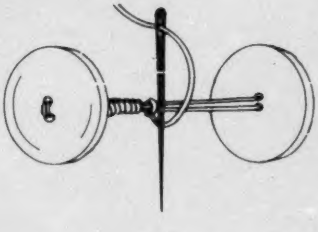
Shank


metal shank

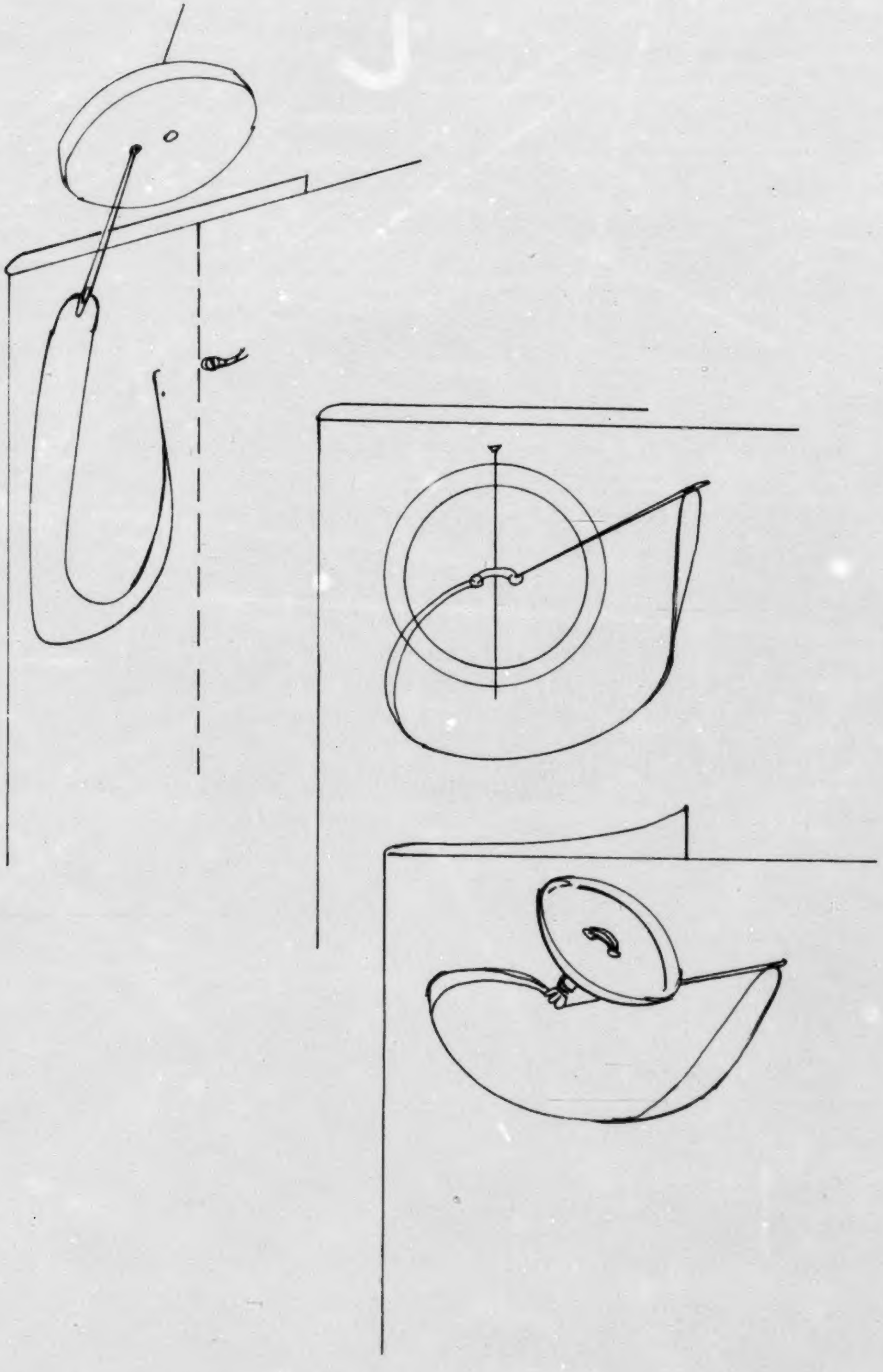

self-shank


removable shank

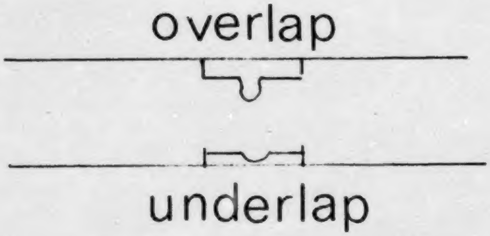

Stayed

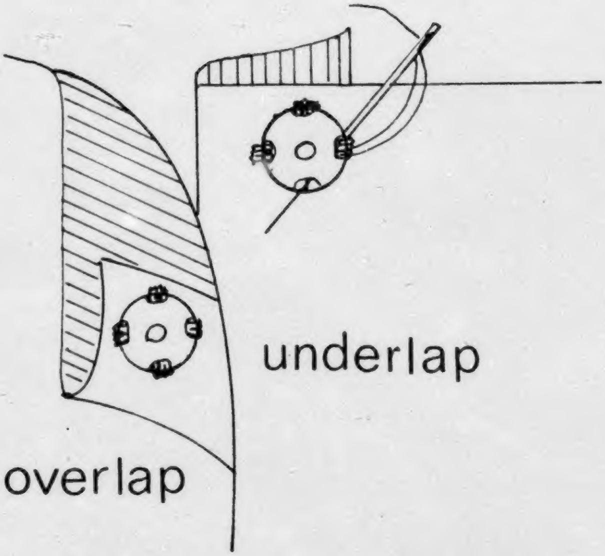

Link

Making a Thread Shank



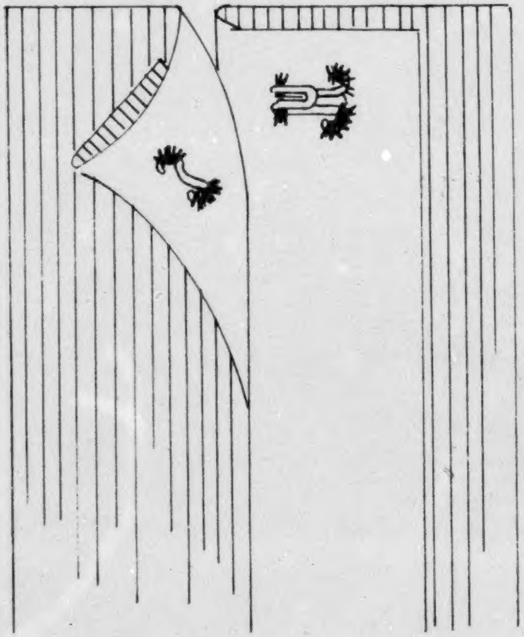
Snaps


overlap
underlap

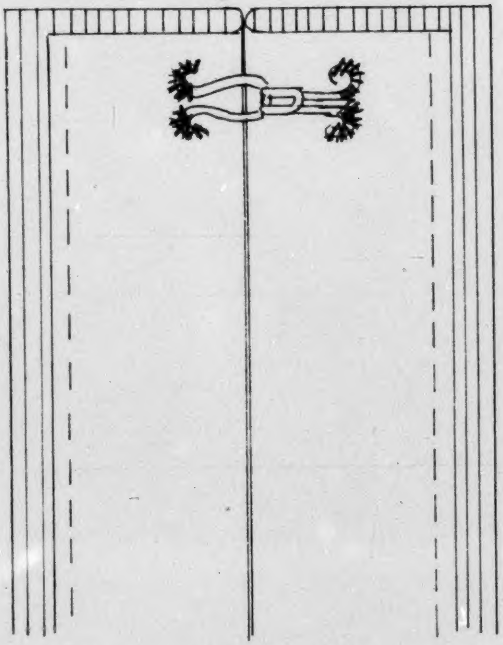

underlap
overlap

Hooks and Eyes

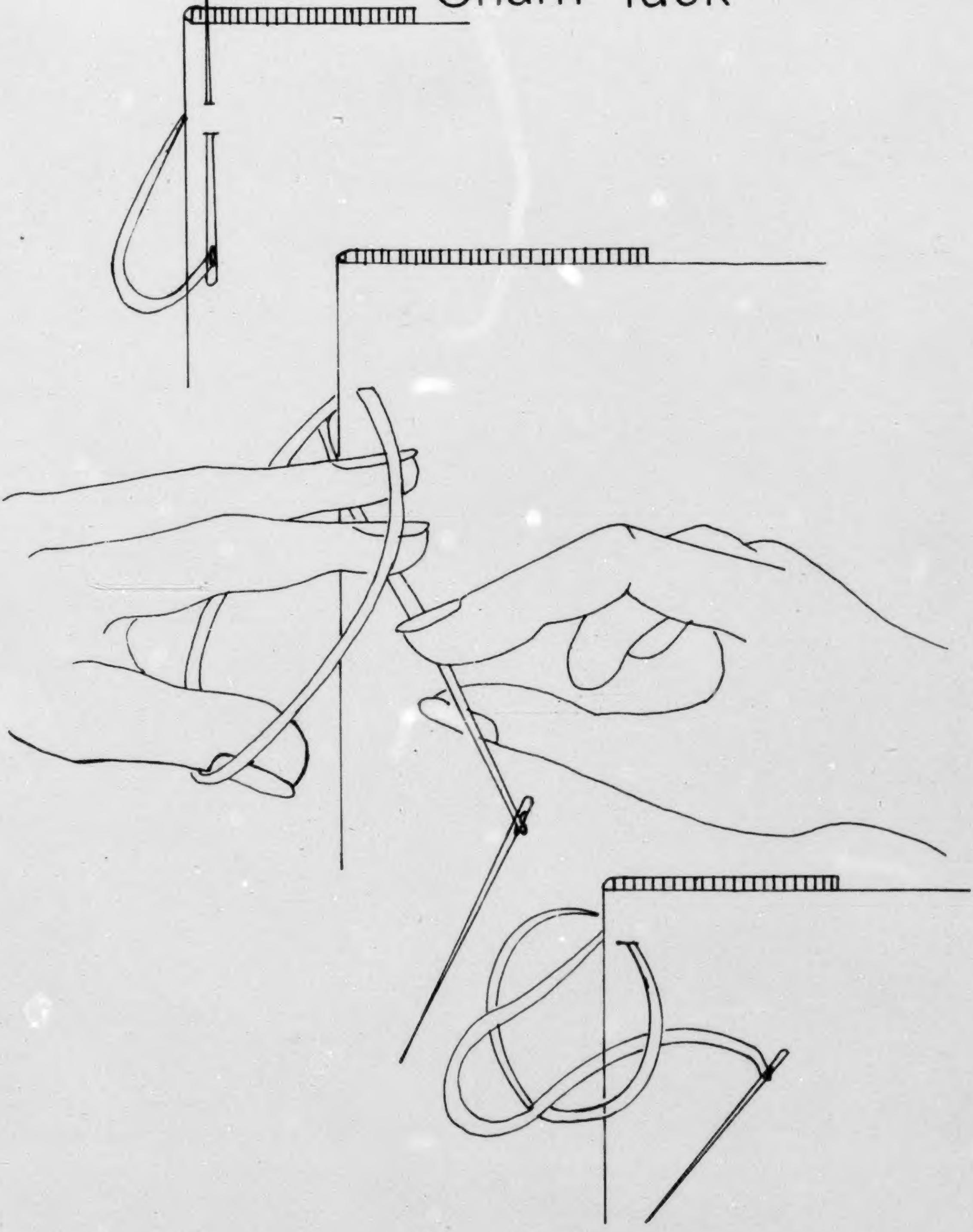
Straight Bar Eye



Round Eye



Chain Tack



ALTERATION OF MEN'S AND WOMEN'S CLOTHING

KEY IDEAS:

A well-fitted garment is flattering and comfortable to the wearer.

Fabric finishes such as permanent press restrict possible garment alterations.

Accurate markings and tags serve as necessary guides for proper alterations.

Many alterations are determined by current styles and customer preference.

High quality alterations produce altered areas that cannot be detected.

WORDS TO KNOW:

symbol
crease line
chalk mark
alteration ticket
tailor's chalk
basic dart
double-pointed dart
restitch
bust dart
lengthen
shorten
bust line
seam line
hip line
underlap
overlap seam
seamwell
cuff
Continental finish
crotch
inseam
outseam
formula method
seat seam
front seam
eccle
facing
original hemline
original seamline
tucks
center-back seam
side-back seam
original line
facing
waistline
take up space between
let out space between
seam
tack
taper
vents
semi-open vents
imitation open vents
full-open vents
top sleeve
undersleeve
hang length
wigan
sleeve-head wadding
shank stitching
showing the linen

Behavioral Objectives	Learning and Evaluation Experiences
Identify reasons for altering garments (C-K)	View a bulletin board titled, "The Many Shapes of People," to recognize the reasons for alteration of garments. Discuss variations in shapes and sizes illustrated. How would specific needs affect garment fit?

Behavioral Objectives	Learning and Evaluation Experiences
	Observe a comic style show in which students model garments of exaggerated size, either large or small. Discuss how you look and feel in garments of incorrect size.
Describe alterations that can be made in ready-made garments (C-C)	Examine ready-made garments to determine whether specific alterations can be made. What factors influence whether a specific alteration can be made?
	Cut from magazines or catalogs pictures of garment styles on which specific alterations can be performed. How does style influence whether a specific alteration can be made?
Identify garments on which specific alterations can be made (C-K)	Make a chart listing characteristics of a garment on which a specific alteration can be performed, and characteristics of a garment on which the alteration cannot be performed. Compare your chart with those of classmates. Develop a class chart to be posted for quick reference.
	Tour dry-cleaning establishments and retail stores to observe garment alterations.
Pursue information on alterations (A-Res)	Participate in buzz sessions to discuss the alterations observed during the field trips. How were the tags marked? How were the garments marked?
Identify the symbols to indicate specific alterations (C-K)	View transparencies illustrating alteration tickets. (See p. 272.) Note the symbols used on each.
Interpret alteration tickets and garment markings (C-C)	Examine alteration tickets with instructions for specific alterations. Compare the tickets with the markings on the garments to be altered.

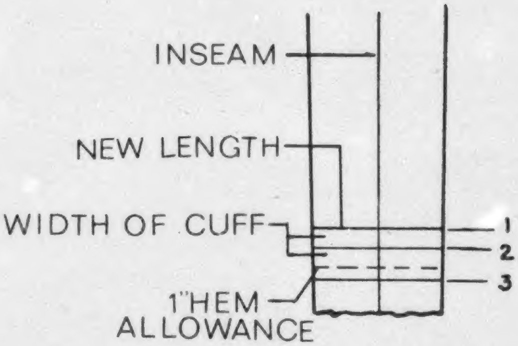
Behavioral Objectives	Learning and Evaluation Experiences
Describe alteration symbols and markings (C-C)	Explain what is meant by the symbols and markings for each garment alteration.
Use alteration symbols on a garment (C-Ap)	Mark a garment to indicate the alterations needed.
Prepare an alteration ticket (C-Ap)	Prepare a ticket for a garment marked for alteration. Check to be sure the correct symbols are used and that all needed information is included.
Define alterations terms (C-K)	Listen as your teacher explains terms involved in a specific alteration and points them out on a transparency. (See Words to Know.) Pronounce each new term as the instructor says it. Listen carefully to the explanation of each term.
Find examples of alterations described by various terms (C-C)	Pin terms naming garment parts which may be involved in alterations in the correct place on displayed garments.
	Use flash cards to test your knowledge of terms and garment parts involved in specific alterations.
Illustrate alteration terms (C-C)	Draw an alteration term from a stack of cards. Without speaking, give clues to terms by pantomiming or pointing to garment part related to term. Student who answers correctly is "it."
Explain alteration terms (C-C)	Take a quiz on alteration terms after each alteration is studied.
Name steps to be followed in performing specific alterations (C-K)	Watch demonstrations of the steps followed in performing specific garment alterations using hand and machine techniques. During the alterations unit you will study the following alterations on men's and women's garments: alterations in length, dart, waistline, width, and crotch.

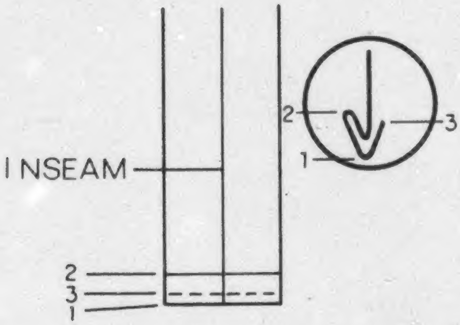
Behavioral Objectives	Learning and Evaluation Experiences
	Observe transparencies illustrating the steps followed in performing specific alterations. (See pp. 258-278.)
	Study a handout sheet describing each alteration as it is presented.
	View displays illustrating each step followed in performing specific garment alterations.
Name the steps in performing specific garment alterations (C-K)	Match on a diagram the descriptions of steps in a specific garment alteration with illustrations of each step.
	Arrange cards illustrating each step in performing a specific garment alteration in order of performance.
Explain the following steps in performing a specific garment alteration (C-C)	Draw a number to determine the step in a specific garment alteration you are to describe. Explain that step using a transparency illustrating it.
	Prepare a bulletin board display illustrating the steps followed in performing a specific garment alteration.
Follow correct steps, for performing specific alterations (P-GR)	Remove original stitches from garment to prepare it for alteration. Follow acceptable procedures in removing stitches, taking care not to damage garment.
	Use discarded garments, and practice forming specific alterations. Compare the alteration ticket with garment markings. Remove stitches to prepare garment for altering. Follow steps for performing the alteration, using hand or machine techniques as needed. Ask for assistance if you are uncertain. Press as needed. Ask your teacher to check your work.

Behavioral Objectives	Learning and Evaluation Experiences
Improve ability to perform specific garment alterations (P-M)	Alter discarded garments to fit a dress form to which body irregularity pads have been added.
	Alter garments brought in by "customers." Compare the alteration tags with the alteration marks on the garment. Alter the garment. Check the fit of the altered garment.
	Alter garments collected for needy persons such as school children. Check the fit of the altered garment.
Determine whether to use machine or hand tachniques for alterations (C-An)	Perform the same alteration using machine techniques on one garment and hand techniques on another. Compare the time required for each and the appearance of the finished alterations. Determine situations in which each technique would be most suitable.
Analyze quality of completed alterations (C-An)	Study completed alterations to determine if their quality is satisfactory. Use a check sheet to determine the quality of your work. What improvements are needed?
	Display garments on which alterations have been completed. Work in teams to check the quality of the alterations. What strong and weak points are most common?
Exhibit attitudes appropriate for an alterations specialist (A-V)	Read the case study "Sue Cuffs the Pants." (See p. 279.) What should Sue have done? What attitudes might have caused Sue's actions? What attitudes would make Sue a better employee?

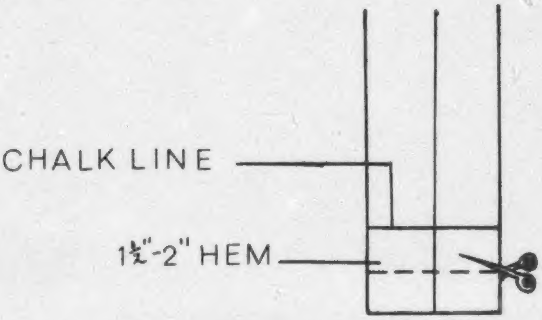
CUFF ALTERATIONS ON TROUSERS

REGULAR FINISH


INSEAM
NEW LENGTH
WIDTH OF CUFF
1"HEM ALLOWANCE
1
2
3

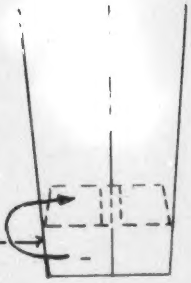

INSEAM
2
3
1
2
3
1

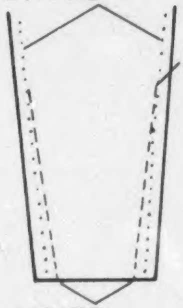
CONTINENTAL FINISH

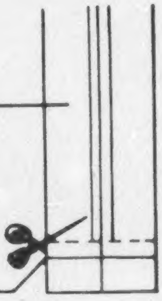

CHALK LINE
1½"-2" HEM

PERMANENT-PRESS CUFF ALTERATIONS

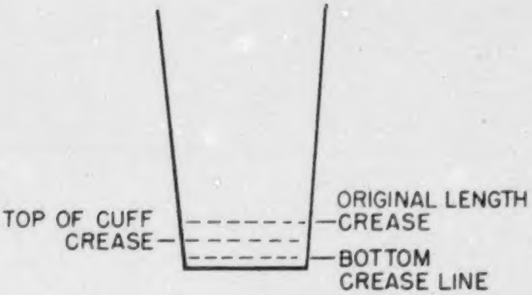
to shorten

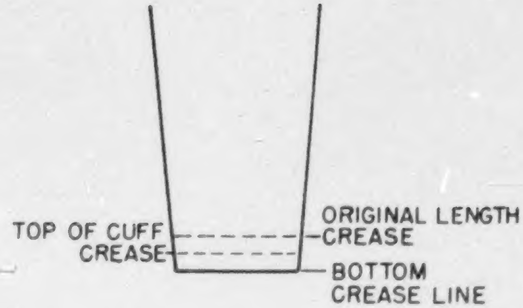

TAPERED LEGS

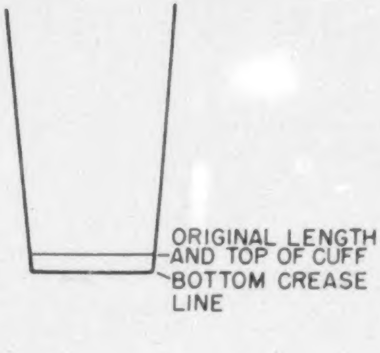

ORIGINAL SEAM LINES
KNEE
NEW SEAM LINES


INSIDE TROUSERS
CUFF CREASE LINE

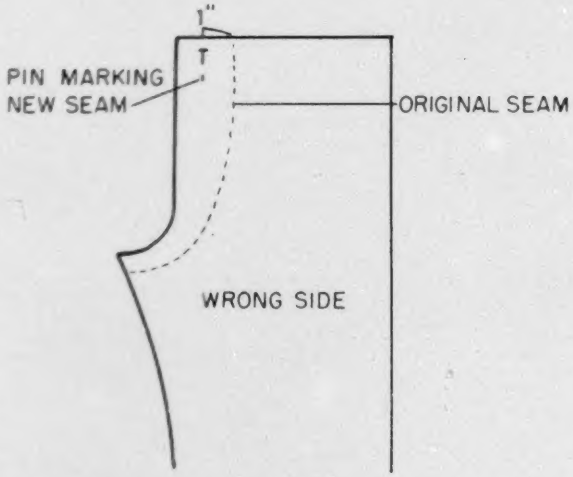
to lengthen

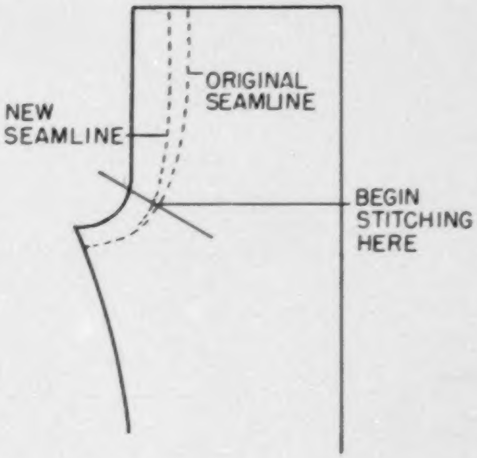

TOP OF CUFF
CREASE
ORIGINAL LENGTH
CREASE
BOTTOM
CREASE LINE

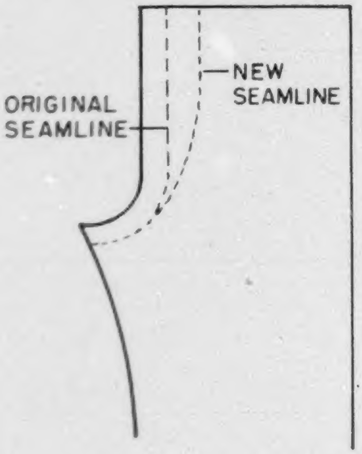

TOP OF CUFF
CREASE
ORIGINAL LENGTH
CREASE
BOTTOM
CREASE LINE


ORIGINAL LENGTH
AND TOP OF CUFF
BOTTOM CREASE
LINE

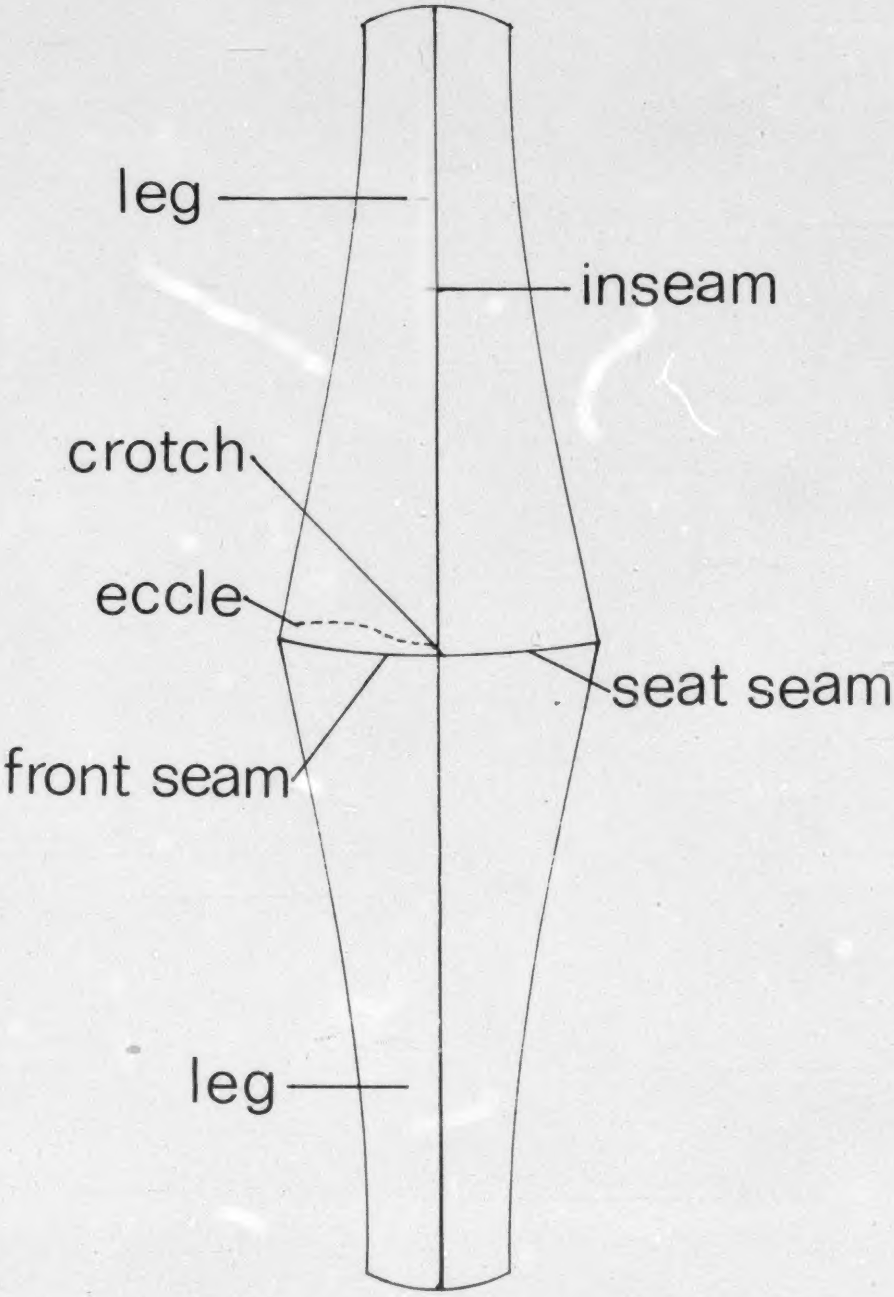
WAISTLINE ALTERATIONS IN TROUSERS

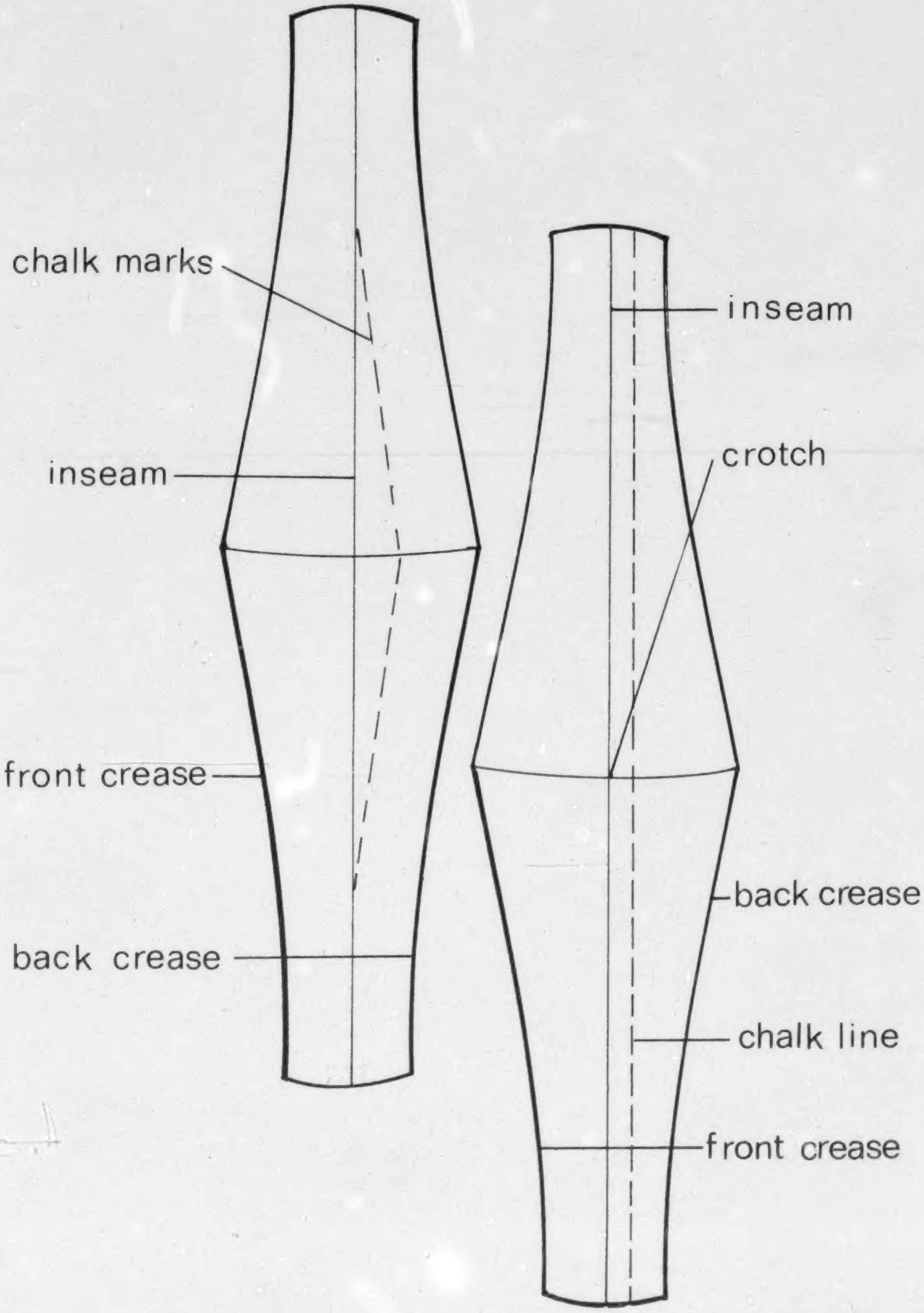

1"
PIN MARKING
NEW SEAM
ORIGINAL SEAM
WRONG SIDE

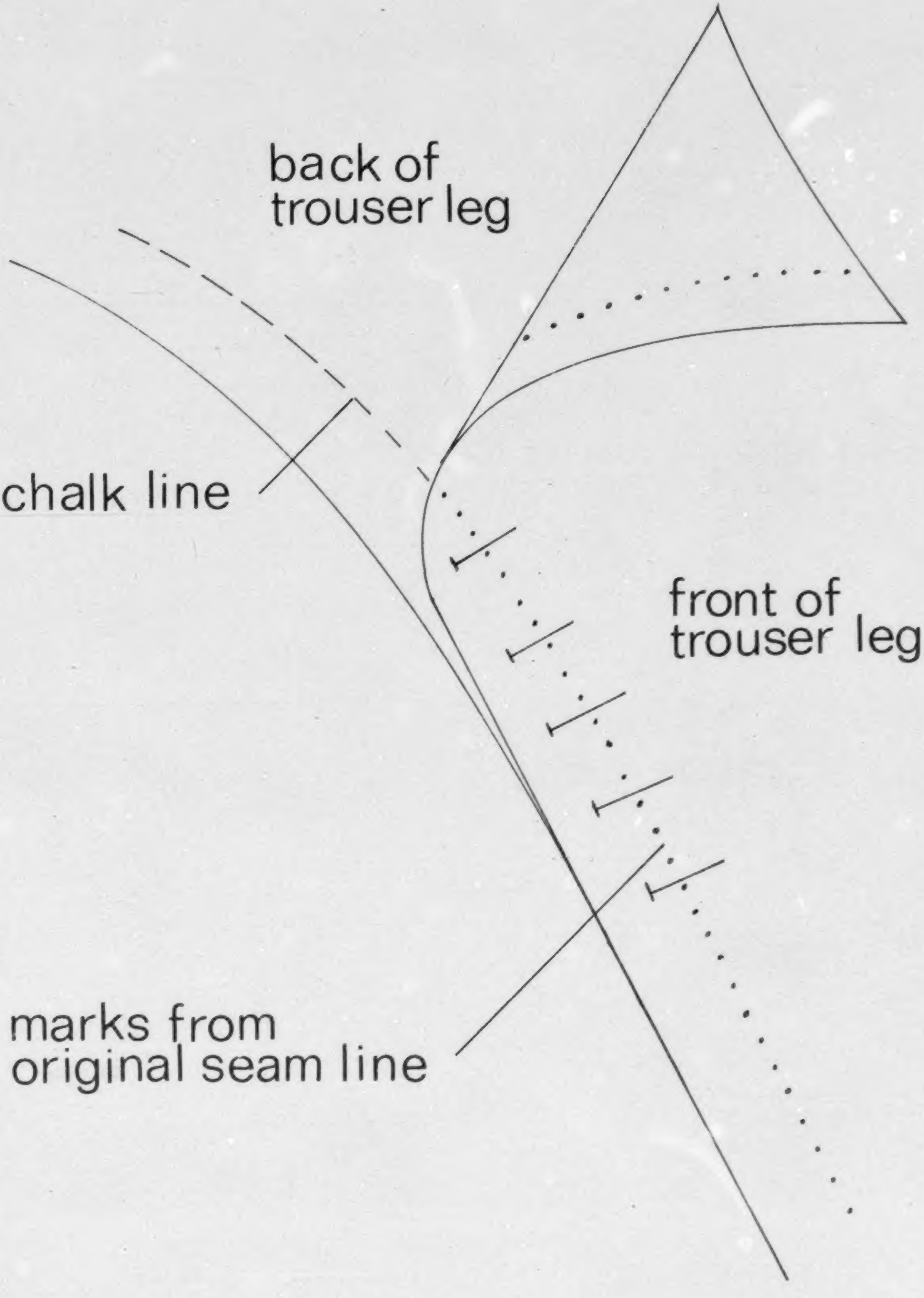

ORIGINAL
SEAMLINE
NEW
SEAMLINE
BEGIN
STITCHING
HERE

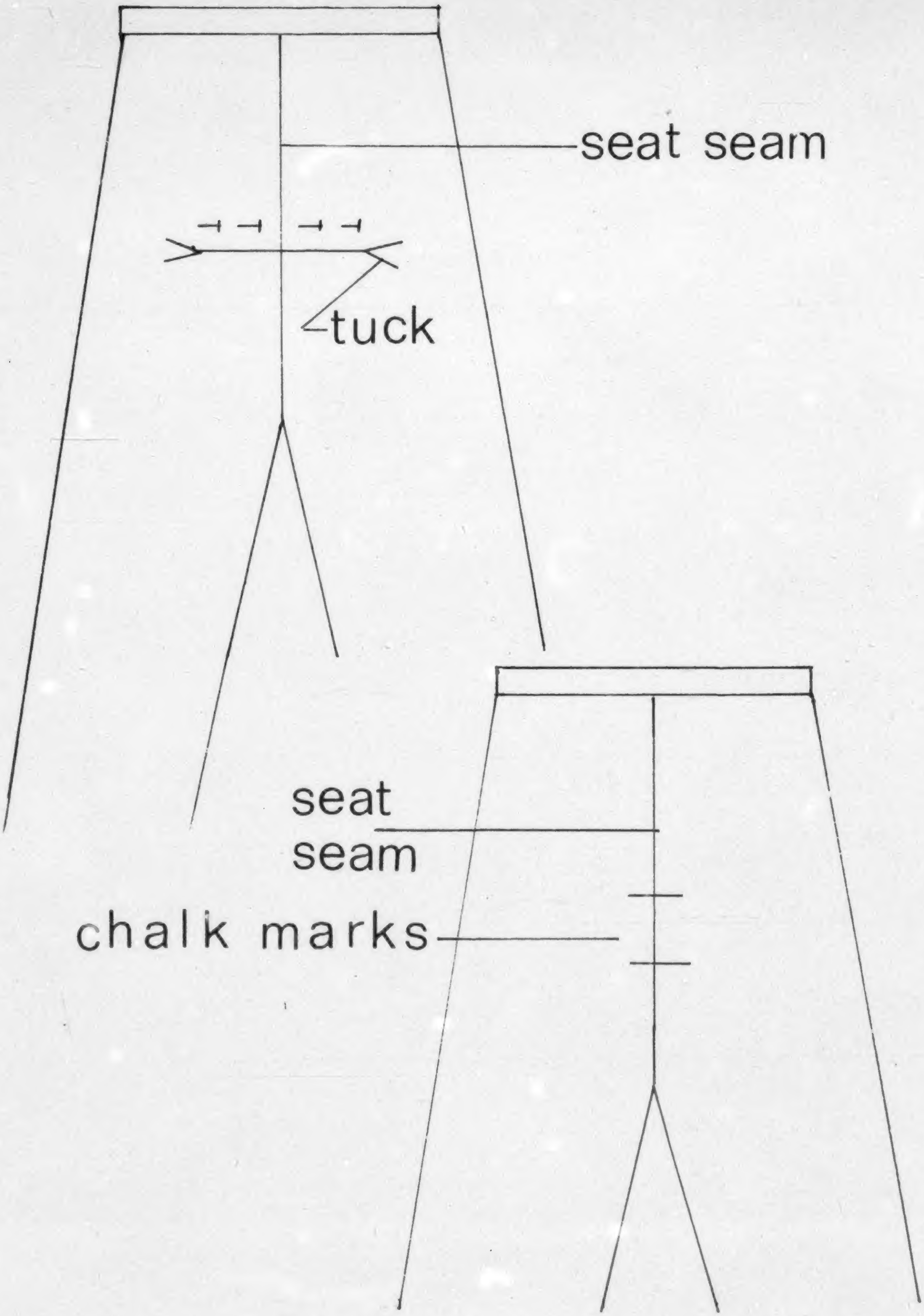

NEW
SEAMLINE
ORIGINAL
SEAMLINE

CROTCH ALTERATIONS FOR TROUSERS AND TAPERING OF TROUSER LEGS

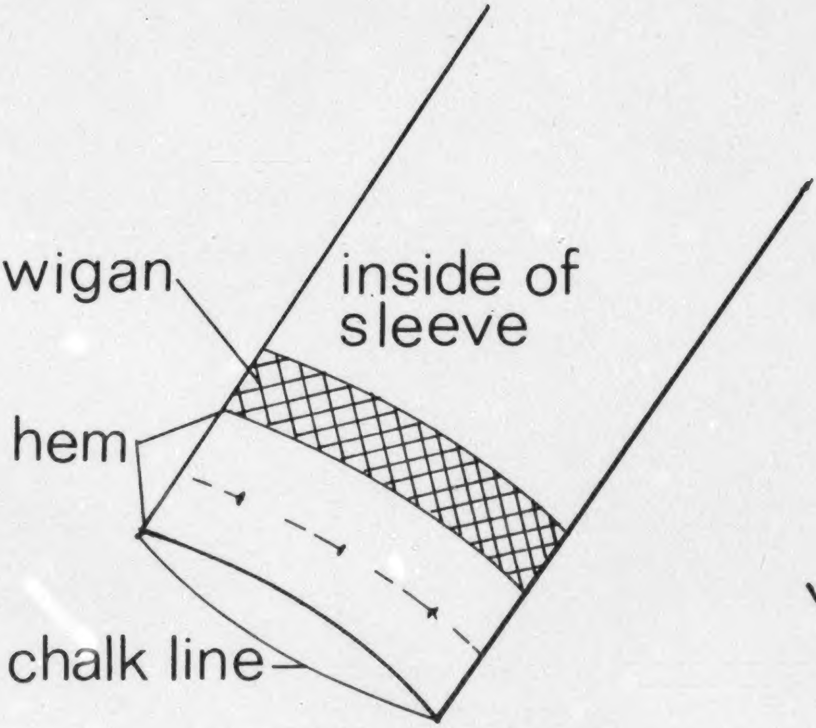

leg
inseam
crotch
eccle
seat seam
front seam
leg

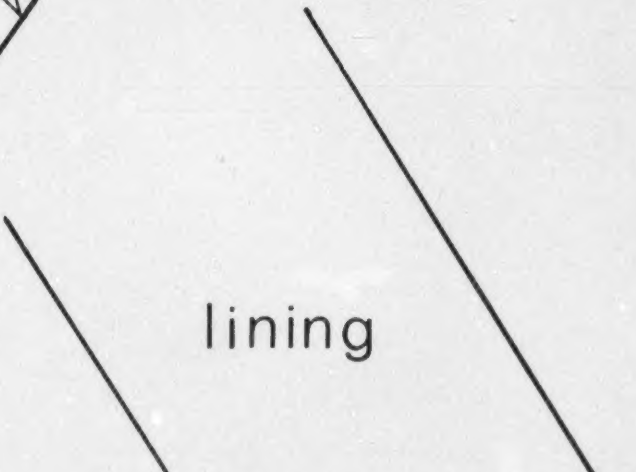

chalk marks
inseam
front crease
back crease
inseam
crotch
back crease
chalk line
front crease


back of trouser leg
chalk line
front of trouser leg
marks from original seam line

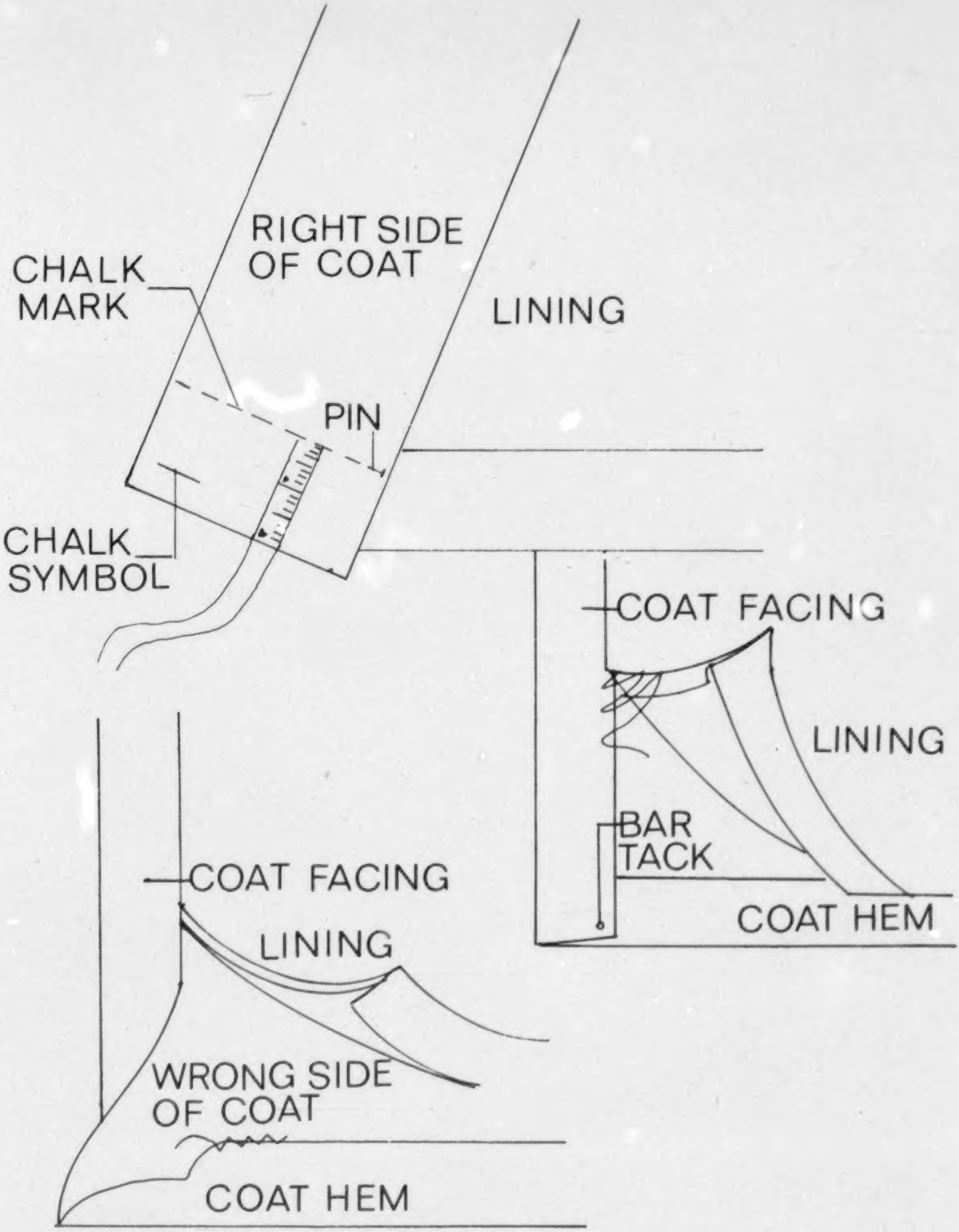

seat seam
tuck
seat seam
chalk marks

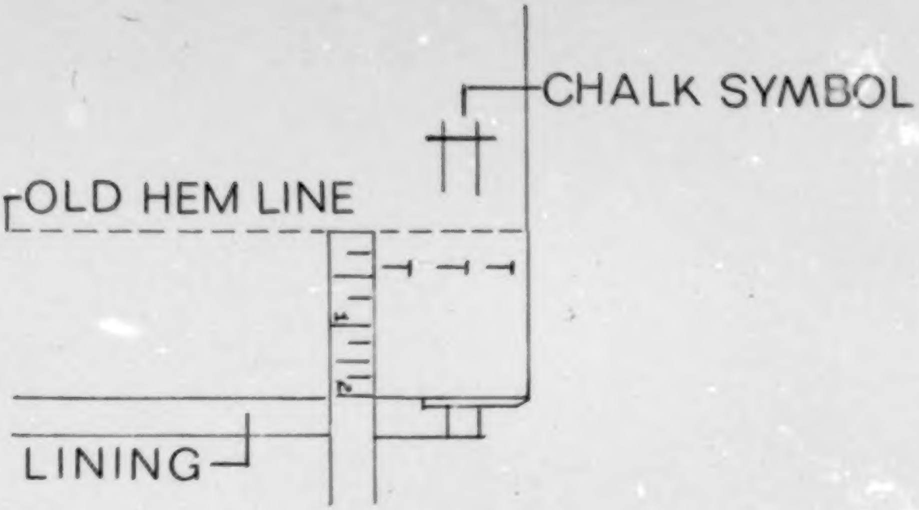
LENGTHEN OR SHORTEN SLEEVES

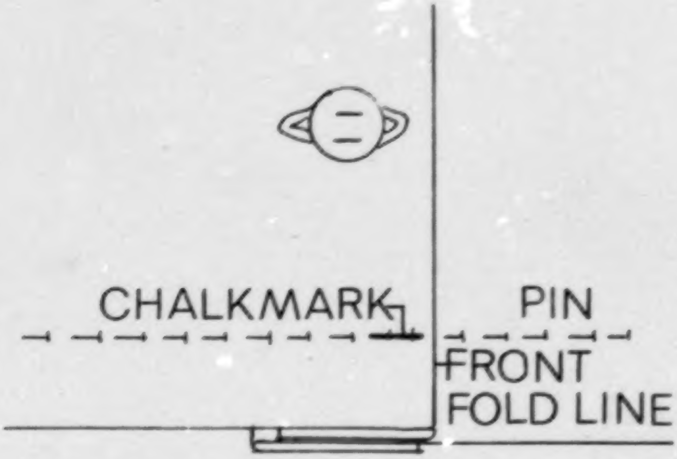

wigan
inside of sleeve
hem
chalk line

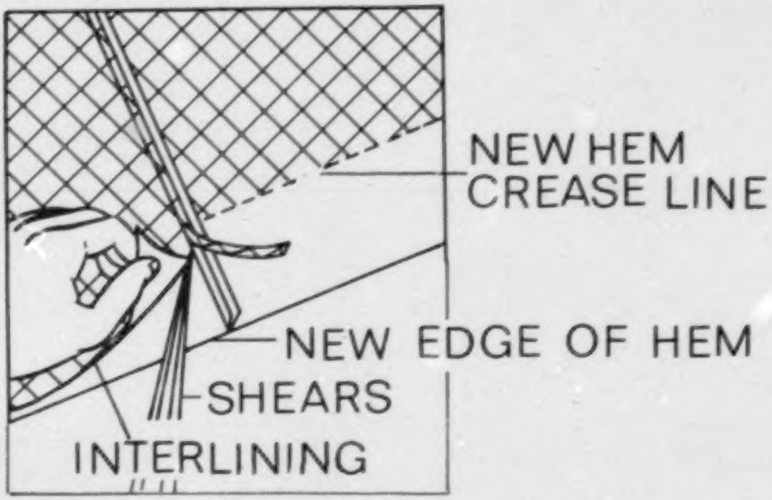


SHORTEN AND LENGTHEN COATS

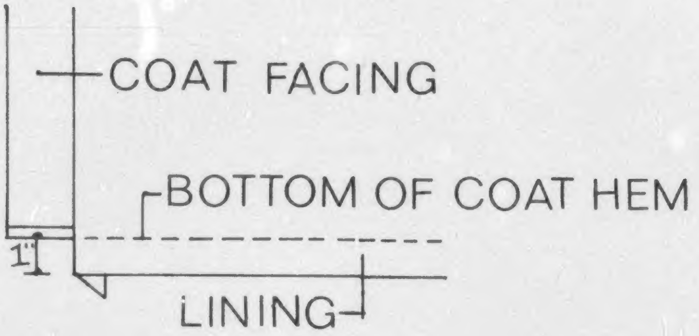

RIGHT SIDE OF COAT
CHALK MARK
LINING
PIN
CHALK SYMBOL
COAT FACING
LINING
BAR TACK
COAT HEM
COAT FACING
LINING
WRONG SIDE OF COAT
COAT HEM

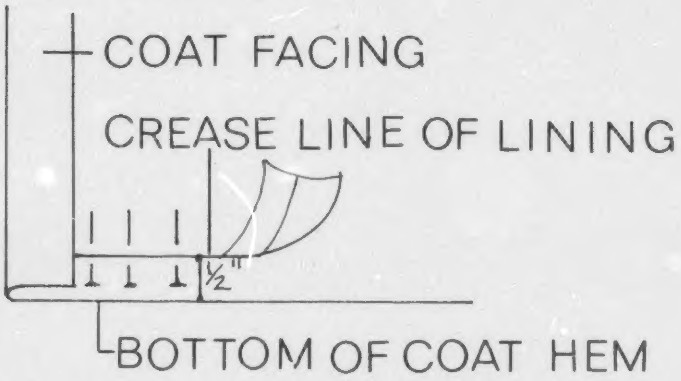

CHALK SYMBOL
OLD HEM LINE
1
2
LINING

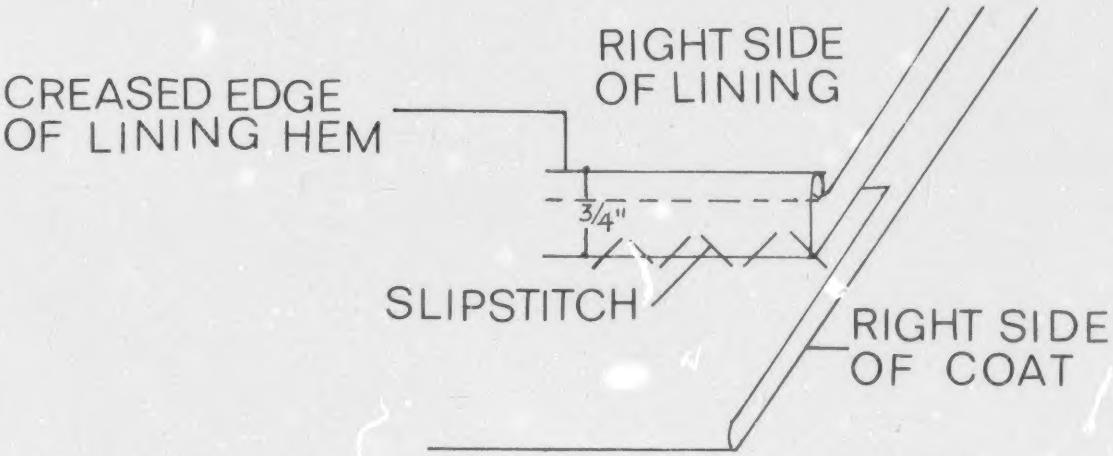

CHALKMARK
PIN
FRONT FOLD LINE

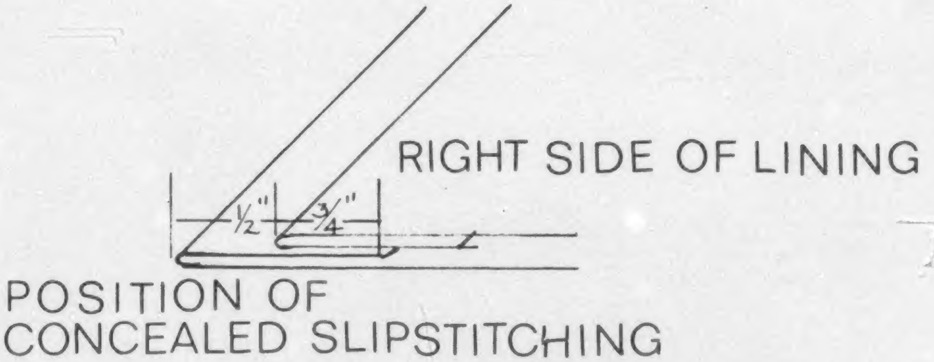

NEW HEM CREASE LINE
NEW EDGE OF HEM
SHEARS
INTERLINING

Variation 1:

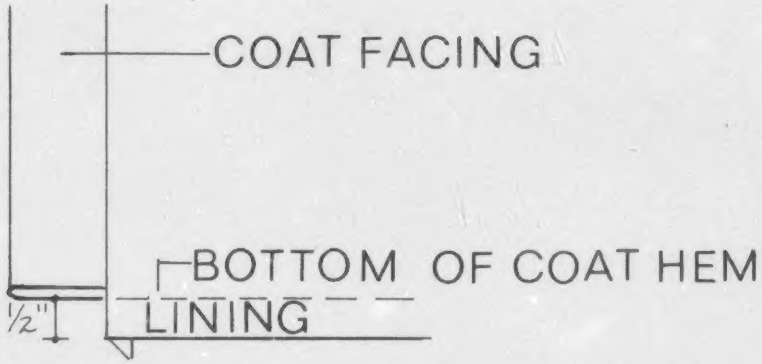

COAT FACING
BOTTOM OF COAT HEM
1"
LINING

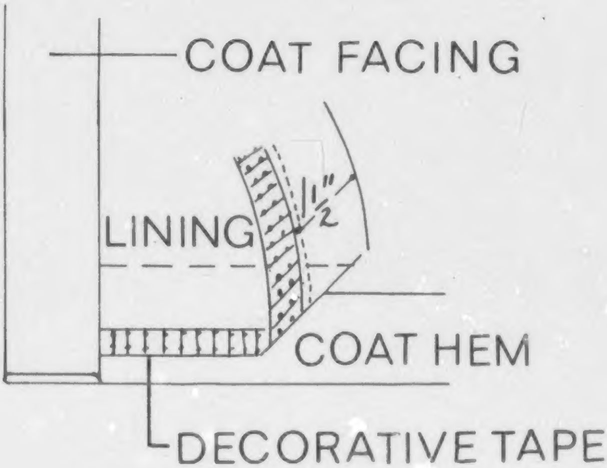

COAT FACING
CREASE LINE OF LINING
½"
BOTTOM OF COAT HEM

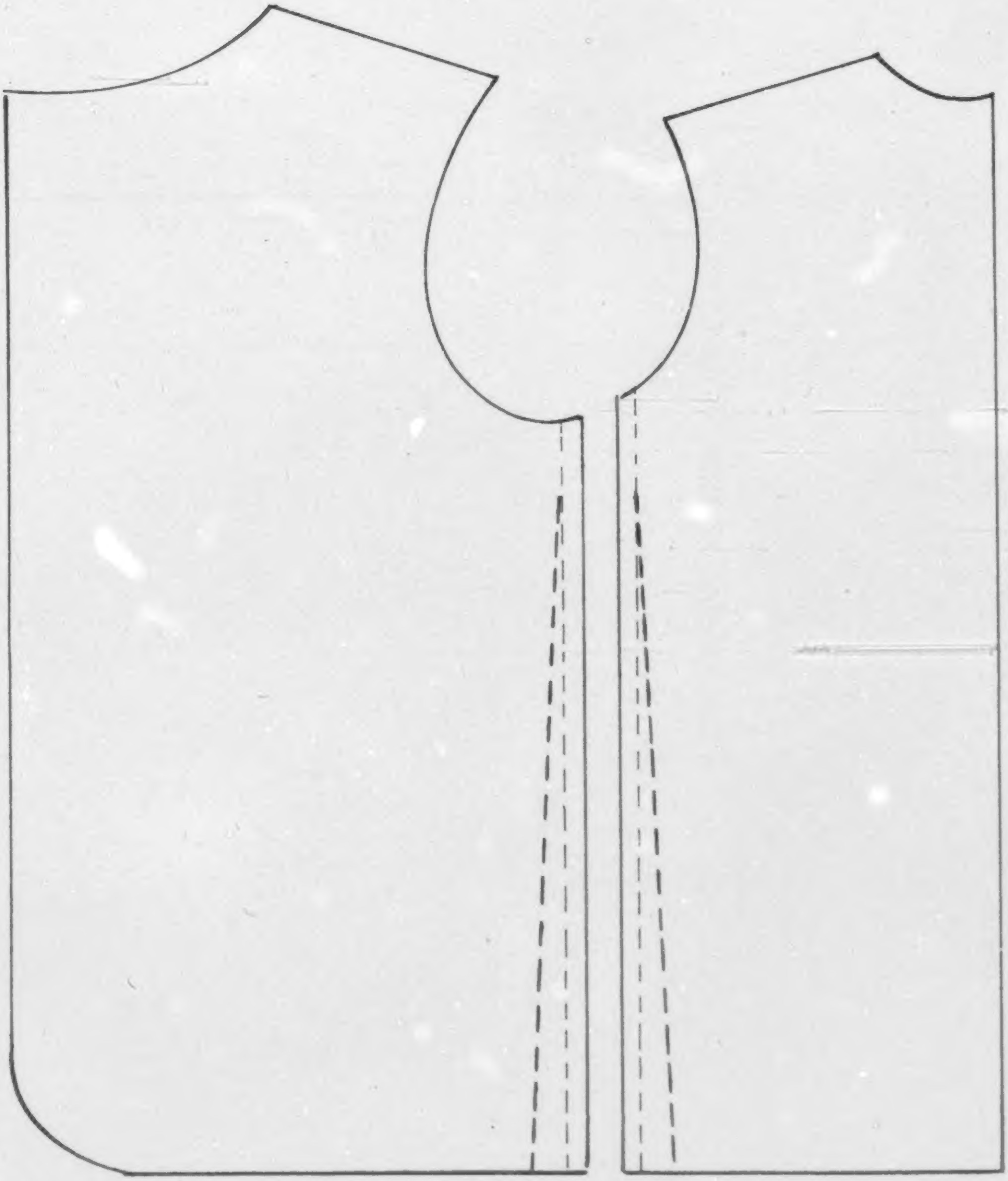

CREASED EDGE
OF LINING HEM
RIGHT SIDE
OF LINING
¾"
SLIPSTITCH
RIGHT SIDE
OF COAT


RIGHT SIDE OF LINING
½"
¾"
POSITION OF
CONCEALED SLIPSTITCHING

Variation 2:


COAT FACING
BOTTOM OF COAT HEM
LINING
½"

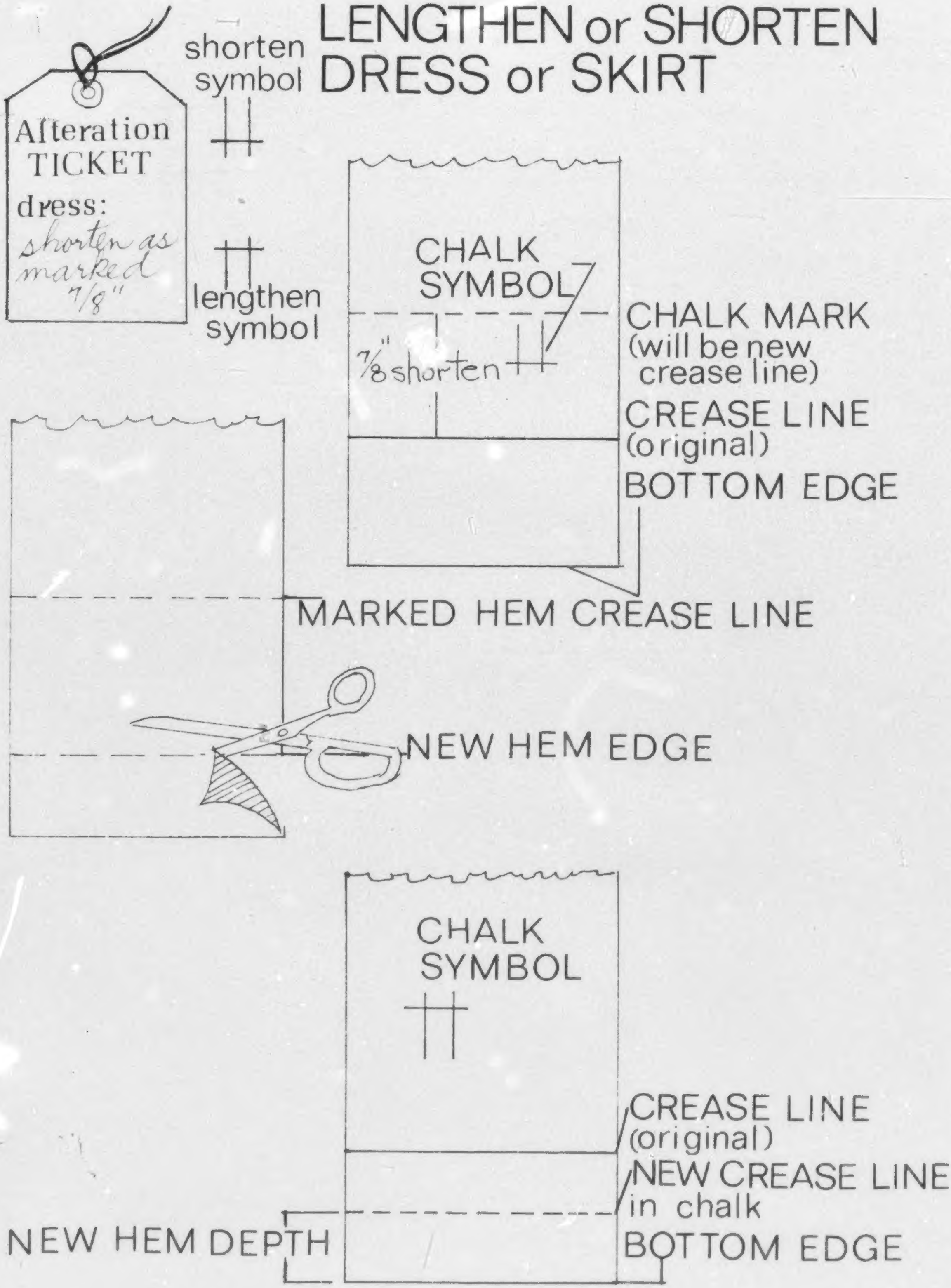

COAT FACING
LINING
1½"
COAT HEM
DECORATIVE TAPE

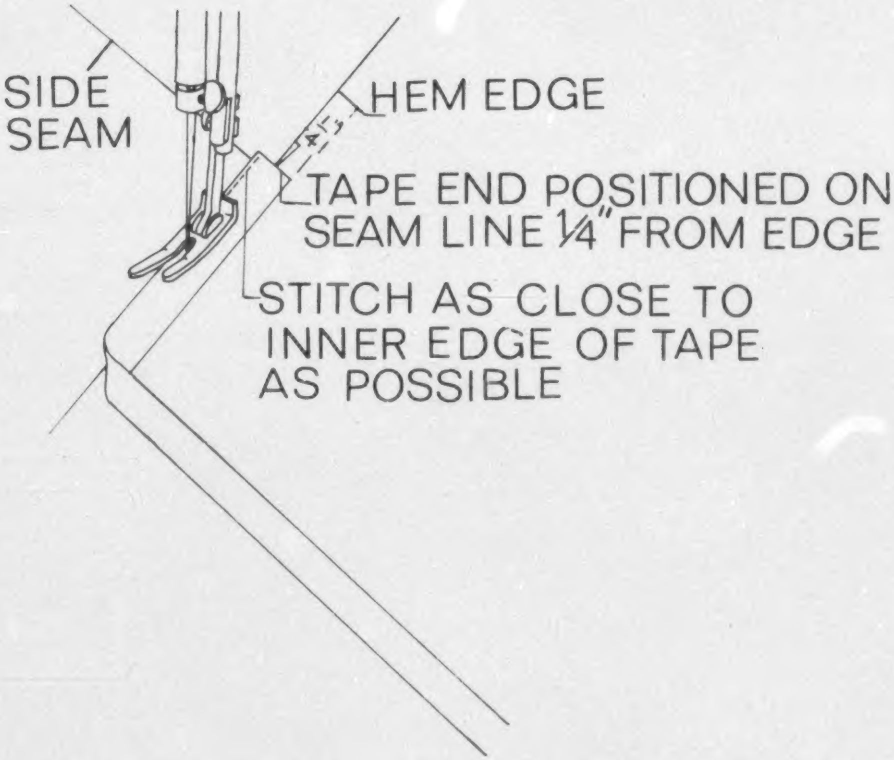


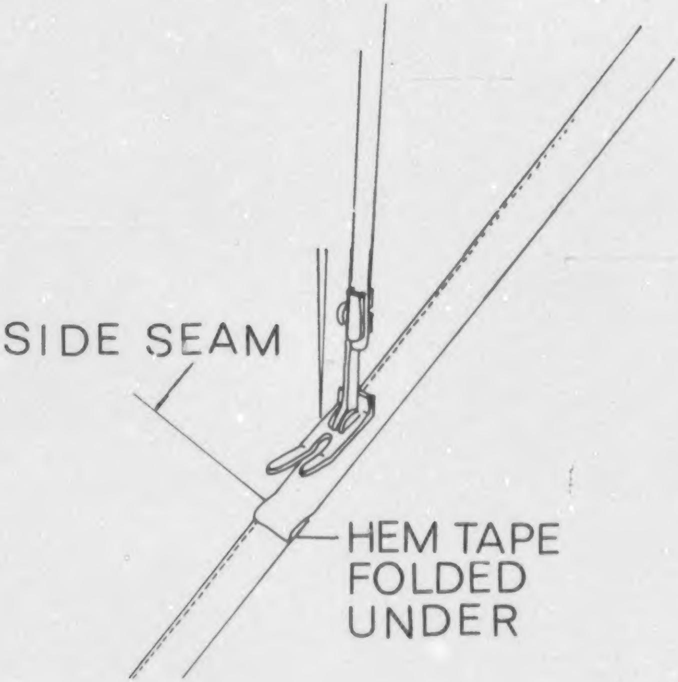
REDUCING SPRING

This alteration is done when the chest size is correct, but the coat is too large through the waist and hips. The alteration is made by taking in an equal amount on each side seam. Start below the armhole, and taper the amount needed.

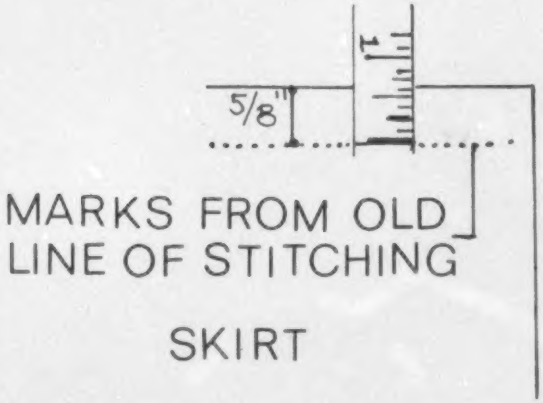
LENGTHEN or SHORTEN DRESS or SKIRT

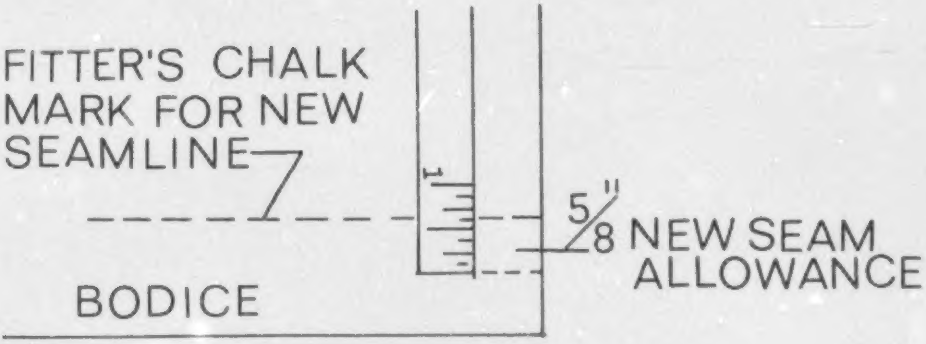

Alteration TICKET
dress:
shorten as marked 7/8"
shorten symbol
lengthen symbol
CHALK SYMBOL
7/8" shorten
CHALK MARK (will be new crease line)
CREASE LINE (original)
BOTTOM EDGE
MARKED HEM CREASE LINE
NEW HEM EDGE
CHALK SYMBOL
CREASE LINE (original)
NEW CREASE LINE in chalk
NEW HEM DEPTH
BOTTOM EDGE

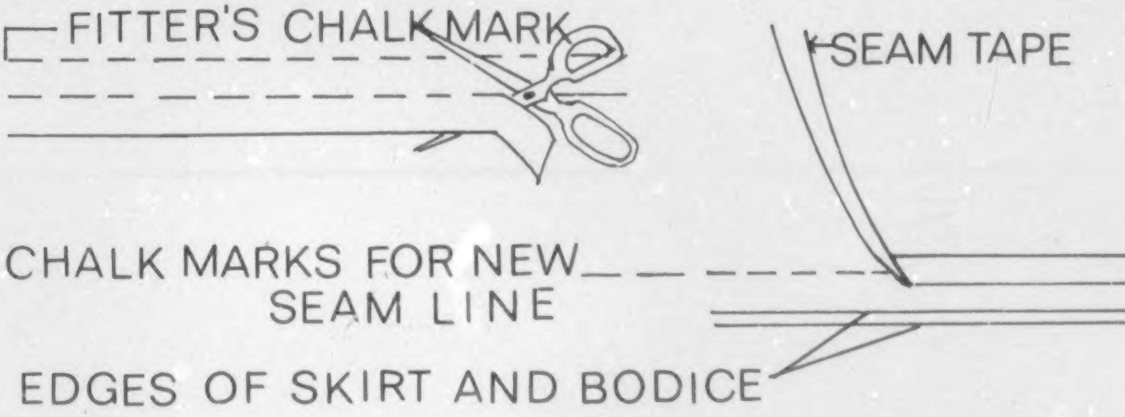

SIDE SEAM
HEM EDGE
TAPE END POSITIONED ON SEAM LINE 1/4" FROM EDGE
STITCH AS CLOSE TO INNER EDGE OF TAPE AS POSSIBLE


SIDE SEAM
HEM TAPE FOLDED UNDER

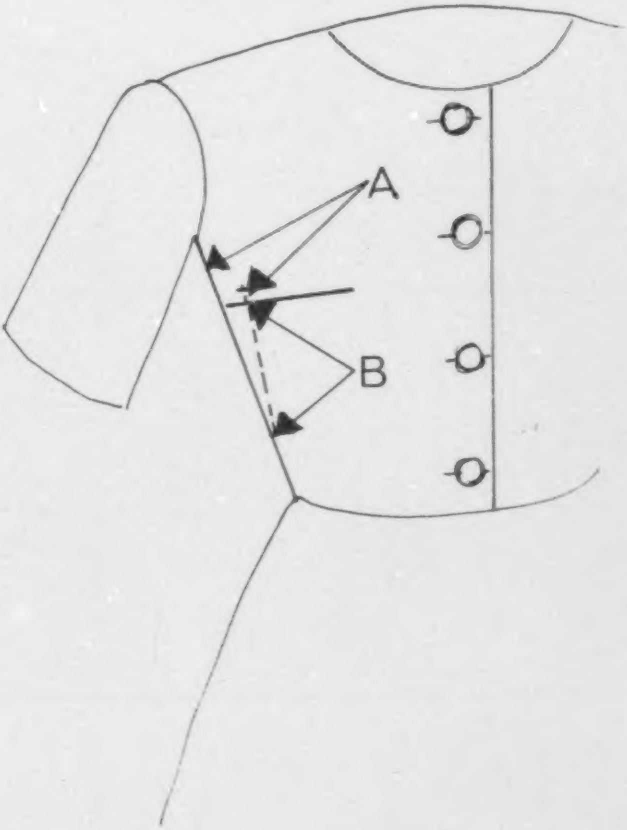
SHORTEN OR LENGTHEN THE BODICE

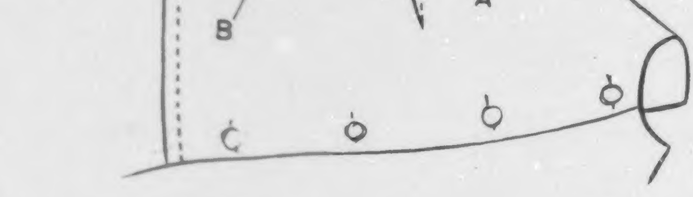

1
5/8"
MARKS FROM OLD LINE OF STITCHING
SKIRT


FITTER'S CHALK MARK FOR NEW SEAMLINE
1
5/8" NEW SEAM ALLOWANCE
BODICE


FITTER'S CHALKMARK
SEAM TAPE
CHALK MARKS FOR NEW SEAM LINE
EDGES OF SKIRT AND BODICE

ALTERATIONS AT THE BUST LINE




ORIGINAL SEAMLINE
A
B

WOMEN"S CLOTHING ALTERATIONS

Because of differences in body shapes, darts in ready-made clothing may have to be relocated, shortened, or lengthened. Darts, however, are often trimmed notched, or clipped so they will lie flat. Darts cannot be altered if they are trimmed, notched, or clipped too close to the stitching line.

Two types of darts are

1. straight or basic--one which tapers to a point at one end
2. double pointed--one which tapers to a point at each end.

Relocating Bust Darts:

The most common alteration for bust darts is relocating or moving the point. The dart should point to the bustline. If it is too high or too low, the correct placement will be marked on the garment by the fitter.

1. Rip the stitching of the underarm seams and the darts.
2. Make a chalk mark at the new point of the dart. Draw lines from the beginning of the original dart to the new point (see Figure 1). The position of the bust dart at the underarm seamline will remain the same unless the garment has ample seam allowance which would allow this poistion to be relocated.
3. Restitch the dart.
4. Press the dart.
5. Restitch the underarm seams.

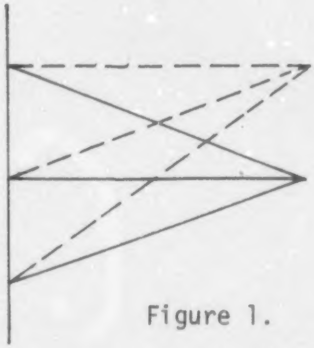


Figure 1.

Relocating Double-Pointed Darts:

When the widest part of the double-pointed dart is not at the waistline, it may be altered if the dart has not been clipped to the seamline. To relocate this type of dart follow these steps:

1. Mark the position of the waistline on the dart, using chalk.

Relocating Double Pointed Darts (Con't)

2. Measure the width of the widest part of the dart. If the distance is greater than 1-1/2 inches, the entire dart will have to be ripped. Draw new dart lines with chalk, locating the widest part of the dart at the chalk mark indicating the waistline. If the distance is less than 1-1/2 inches, redraw only the widest part of the dart, and stitch again, leaving the two points in their original positions. If the garment is fitted, change the side seams to conform with the relocated darts.

Lengthening Darts:

1. Rip the side seam in the dart area. (This is necessary to either shorten or lengthen the dart.)

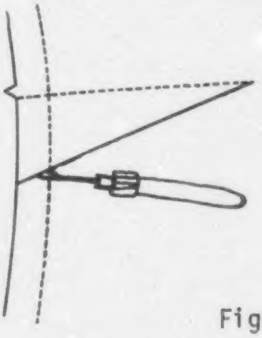


Figure 2.

2. To lengthen a dart, draw a chalk line from the base of the dart to the new point. Stitch along the chalk line, being careful to taper the dart to nothing at the point. This prevents a pucker at the end of the dart. NOTE: It is not necessary to rip the original line of stitching when the dart is lengthened.

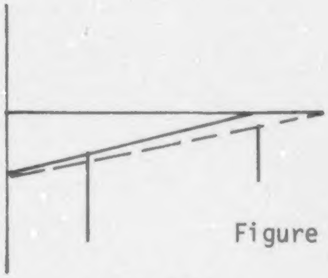


Figure 3.

3. Press the dart.

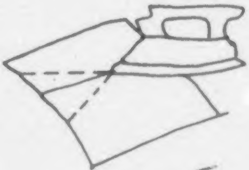


Figure 4.

4. Restitch the side seam.

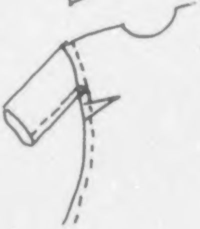


Figure 5.

Shortening Darts:

1. To shorten a dart, mark the point at which the dart should end (see Figure 6). Make a chalk line, and stitch to the new point following line.

2. Rip the original stitching which extends beyond the new point.

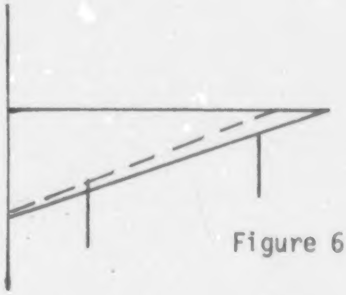
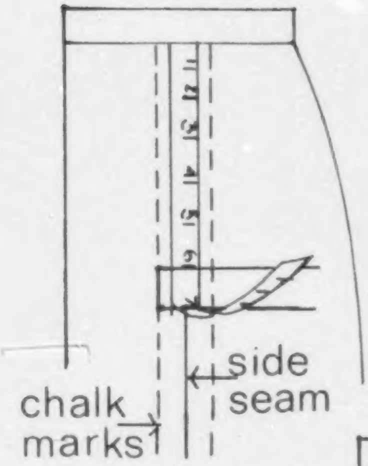
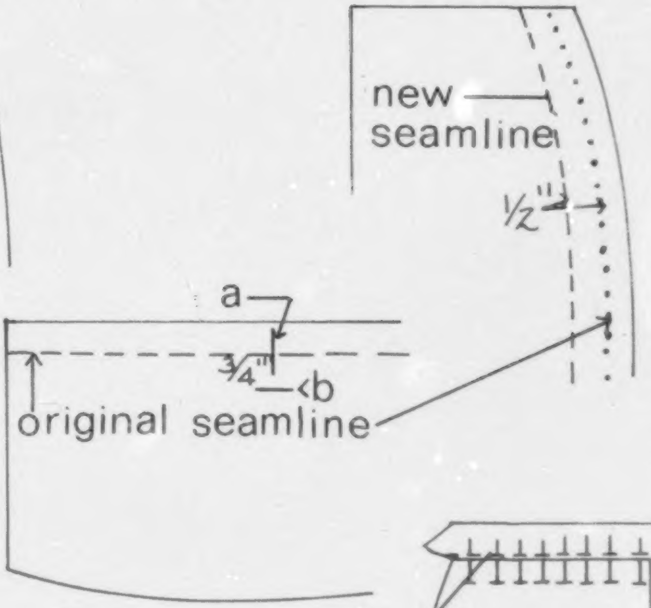
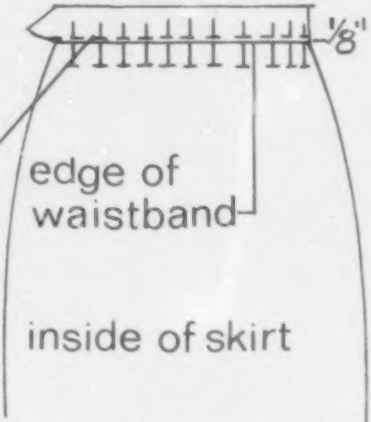


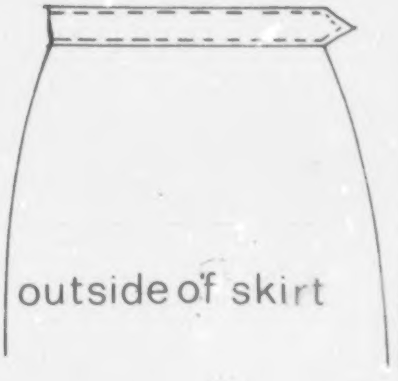
Figure 6.

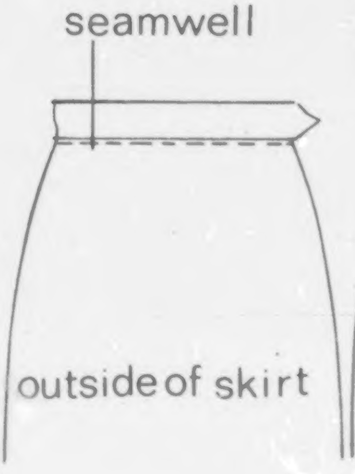
WAISTLINE AND HIP LINE ALTERATIONS

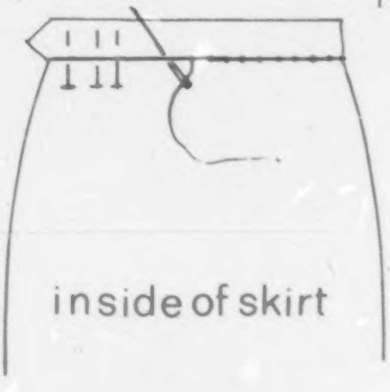

1
2
3
4
5
6
side seam
chalk marks


new seamline
1/2"
a
3/4"
b
original seamline


1/8"
stitching line
edge of waistband
inside of skirt


outside of skirt


seamwell
outside of skirt


inside of skirt

SUE CUFFS THE PANTS

Case Study

Sue was hired as a helper during the rush season at the newest and nicest cleaners in town. She has a pleasant personality, is nicely groomed, has had some experience in sewing, and works hard at her job. She worked on mending ladies' clothes and changing side seams. One day Mrs. Smith, her employer, had many pairs of men's pants to cuff. She gave a pair to Sue. Sue had never cuffed pants, but she didn't tell Mrs. Smith. She just took the pants and cuffed them the way she thought it should be done. The pants were returned because they were an inch too short, and the cleaners had to stand the loss.

What should Sue have done?

What action do you think Mrs. Smith took in handling the problem?

CONCEPT: Laundering and Dry Cleaning

JUSTIFICATION:

Since the laundry and dry-cleaning industry is primarily made up of small neighborhood shops, many job opportunities are available for the CVAE student who acquires basic skills in laundry and dry-cleaning procedures. Laundries and dry-cleaners also provide a market for clothing repair skills and alteration techniques.

OVERALL OBJECTIVES

Perform the tasks required of employees in the laundry and dry-cleaning industry (P-M)

Determine laundry and dry-cleaning procedures appropriate for various textiles (C-An)

Display pride in achieving quality results when performing laundry and dry-cleaning tasks (A-V)

RECEIVING, SORTING, AND MARKING

KEY IDEAS: Information obtained when the garment is received can influence procedures used in caring for the garment.

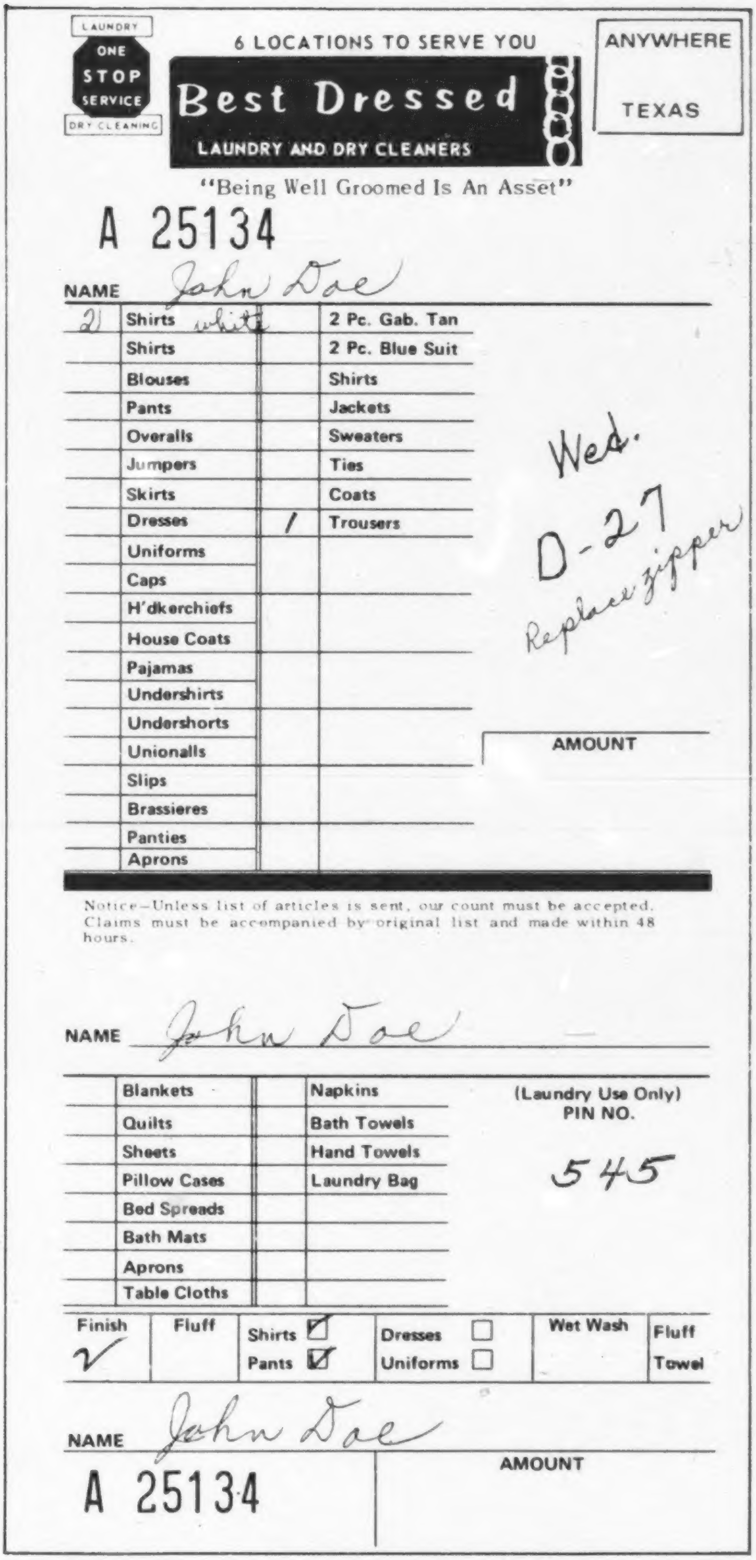
Careful sorting and marking of garments prevents confusion and delay in processing.

WORDS TO KNOW: ticket sorting marking
bundle

Behavioral Objectives	Learning and Evaluation Experiences
Identify the receiving system for laundry and dry cleaning (C-K)	Take a field trip observe the receiving processes of local commercial laundry and dry-cleaning establishments. Who receives the laundry? What are the responsibilities of the receiver?
	Begin a bulletin board display showing the steps involved in laundry and dry cleaning from receiving to delivery. Add to the bulletin board as each new step is discussed.
Identify procedures for receiving articles (C-K)	Examine a sample laundry or dry-cleaners ticket. List the information on the ticket. State information the receiver must write on the ticket, such as the special instructions regarding stains, repairs, alterations and kind of finish wanted. (See p. 284.)
Explain the importance of obtaining accurate and complete information from the customer (C-C)	Divide into groups for buzz sessions. Discuss reasons accurate and complete information is important to both the customer and the business establishment.
Demonstrate ability to receive laundry and dry cleaning (C-Ap)	Role play to show procedure in receiving a bundle from a customer. Let rest of class critique your performance.
Identify procedures for sorting and marking laundry and dry cleaning (C-K)	Cite procedures for sorting and marking observed during the field trip to laundry and dry cleaning establishments. How are the clothes sorted? Who sorts the clothes? When are the clothes marked? How are they marked?

Behavioral Objectives	Learning and Evaluation Experiences
Explain the purpose of sorting and marking a bundle (C-C)	Describe the method of sorting and marking observed on the field trip. Why are clothes sorted and marked? Why is laundry weighed? Why is accuracy in marking important? What are the marker's responsibilities? Examples: looking for rips and damages, for unusual stains, and for buckles, buttons, ornaments that need to be removed before dry cleaning.
Demonstrate the sorting of a bundle (C-Ap)	Sort a bundle into laundry and dry cleaning following procedures used in a laundry and dry-cleaning establishment.
Show how to mark a bundle using the various procedures (C-Ap)	Mark the bundle by various methods--tickets stapled on, tags pinned on, and name written in indelible ink.

SAMPLE TICKET



LAUNDRY
ONE STOP SERVICE
DRY CLEANING

6 LOCATIONS TO SERVE YOU

Best Dressed
LAUNDRY AND DRY CLEANERS

ANYWHERE
TEXAS

"Being Well Groomed Is An Asset"

A 25134

NAME John Doe

2)	Shirts white		2 Pc. Gab. Tan
	Shirts		2 Pc. Blue Suit
	Blouses		Shirts
	Pants		Jackets
	Overalls		Sweaters
	Jumpers		Ties
	Skirts		Coats
	Dresses	1	Trousers
	Uniforms		
	Caps		
	H'dkerchiefs		
	House Coats		
	Pajamas		
	Undershirts		
	Undershorts		
	Unionalls		
	Slips		
	Brassieres		
	Panties		
	Aprons		

Wed.
D-27
Replace zipper

AMOUNT

Notice—Unless list of articles is sent, our count must be accepted. Claims must be accompanied by original list and made within 48 hours.

NAME John Doe

	Blankets		Napkins
	Quilts		Bath Towels
	Sheets		Hand Towels
	Pillow Cases		Laundry Bag
	Bed Spreads		
	Bath Mats		
	Aprons		
	Table Cloths		

(Laundry Use Only)
PIN NO.
545

Finish	Fluff			Wet Wash	Fluff Towel
✓		Shirts ☑ Pants ☑	Dresses ☐ Uniforms ☐		

NAME John Doe

A 25134

AMOUNT

LAUNDRY PROCEDURES

KEY IDEAS: The life of a garment can be extended through use of proper laundry procedures.

Laundry procedures vary with fiber content and color of garment.

WORDS TO KNOW:

- sort
- spot remover
- stains
- absorbents
- bleaches
- solvents
- dissolve
- cornstarch
- softeners
- blotting paper
- pre-treating
- peroxide
- sour bath
- detergents
- fluff
- tumble
- soap

Behavioral Objectives	Learning and Evaluation Experiences
Identify fiber content and care information on garment labels (C-K)	Review information on the kinds of fibers used to make fabrics. (Refer to textile study.) Study garment labels to observe how fiber content is identified. What care information is given?
Explain importance of label information in caring for a garment (C-C)	Read and study labels attached to garments. How can information on a label be used to determine care required by a garment? What information included on the labels would aid in determining correct laundry procedures to use on the garment? (See p. 291.)
Identify the steps in preparing clothing for laundering (C-K)	View a filmstrip on laundry procedures. List the steps in clothing preparation before laundering: 1) sorting, 2)preparation (closing fasteners, checking cuffs and pockets), 3) pre-treating heavily soiled areas, such as cuffs, collars, and pockets, 4) spotting.
Identify sorting procedures (C-K)	Observe a demonstration on sorting procedures. How are the clothes sorted? List procedures used for sorting.
Demonstrate the sorting of clothes for laundering (C-C)	Practice sorting a bundle of clothes. Use clothes that were collected for welfare, clothes brought from home, or a faculty member's laundry.

Behavioral Objectives	Learning and Evaluation Experiences
Identify common stains found on clothing (C-K)	Study a handout on spotting. (See p. 293.) Look at, smell, and touch the stains on swatches of a variety of fabrics. (Stains should include chocolate, ink, lipstick, makeup, alcohol-based stains such as perfume or liquor, perspiration, milk, grass, blood.) Check your identification of each stain with the tag on the back of the swatch.
Recognize various stains and appropriate removal methods (P-P)	Stain fabric swatches. Examine stain swatches to recognize common stains. View a demonstration on the use of spot removers on various stains. Spot or stain removers are classified into three groups: 1) Solvents--such as water and cleaning fluid, which dissolve stains. 2) Absorbents--such as blotting paper and cornstarch, which absorb stains. 3) Bleaches--such as lemon juice and peroxide, which remove color or stain.
Give examples of stains that can be indentified by smell (C-C)	Discuss various stains, and indicate the ones that are identifiable by smell. Can you think of others that can be identified by smell?
Identify procedures for removing various stains (C-K)	View a display of supplies for stain removal. Study cards attached to each item telling how it is used in stain removal and what stains it will remove. Play "Spin the Bottle" to practice telling how to remove various stains. As the bottle spins, the person who is "it" names a stain. When the bottle stops the person it points toward must tell how to remove that stain. The game may also be played so that a stain removing agent is named and the person toward whom the bottle points names stains it will remove.

Behavioral Objective	Learning and Evaluation Experiences
Illustrate stain removal (C-C)	Make a chart or bulletin board display showing the most common stains and ways they can be removed. Include swatches showing stain before and after removal.
Demonstrate the use of spot removers on various stains (C-Ap)	Practice removal of common stains from fabric swatches. Identify the stain. Follow acceptable procedures for removing it. Note results. Identify and remove stains from clothes laundered during laundry unit.
Define laundry terms (C-K)	View a filmstrip on laundry aids. Note the names for laundry aids. Name the laundry aids represented by flash cards or product containers.
Identify laundry aids by type (C-K)	Collect empty containers of laundry aids used in your community. Sort into categories and label. Which are light-duty or mild soaps? Light-duty or mild detergents? All-purpose soaps? All-purpose detergents?
List rules for using laundry aids (C-K)	Examine laundry-aid boxes; read instructions carefully. Why is it important to read the labels? What information have you found on laundry-aid containers?
Illustrate the use of soap and detergent in hard and soft water (C-C)	Put a cup of hard water in one bottle and a cup of soft water (rainwater or commercially softened water) in another bottle. Add granular soap, 1/4 teaspoon at a time, to each bottle, and shake. Continue adding soap until there is 1 inch of suds. Keep accurate measurements of amount of soap used. Repeat procedure, using detergent.
Demonstrate the effect of water softeners and conditioners in hard water (C-Ap)	Put a cup of hard water in each of two bottles. Add 1 teaspoon of soap to each. In one, put the amount of water softener recommended on the package for 1 cup of water. Shake, and observe the difference between the suds levels. Which container has a higher suds level. What is the effect of the conditioner in the hard water?

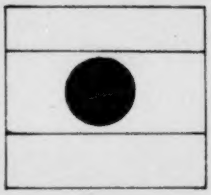
Behavioral Objectives	Learning and Evaluation Experiences
Demonstrate the effect of chlorine bleach on various fibers (C-Ap)	Obtain samples of a variety of fabrics (cotton, wool, linen, silk, nylon, etc). Observe samples under magnifying glass or pick glass before bleaching. Place a drop of chlorine bleach on each sample, and rub. Observe bleached sample under magnifying glass or pick glass. Which fibers are weakened by the bleaching action? Collect samples of fabrics with resin finishes, such as easy-care, wash-and-wear, or permanent-press fabrics. Soak them in a chlorine bleach solution. What is the result? Why do they turn yellow? How could yellowing have been prevented? Note the importance of reading the label before using laundry products.
Demonstrate the effect of fabric softeners (C-Ap)	Secure two identical items, such as cotton towels, socks, or blouses. Wash and rinse together. Remove one item, and place in a rinse with a fabric softner. Dry and compare. Is there a difference in feel? In appearance?
Identify procedures for using washing machine (C-K)	Observe a demonstration on the use of a washing machine. Note the following steps: 1) loading; 2) reading and setting the dial; 3) setting the control to the correct cycle; 4) adding laundry aid to the equipment.
Describe proper procedures for using washing machine (C-C)	Describe steps to follow when using the washing machine. Make a poster listing these steps to post above the washing machine.
Demonstrate the use of the washing machine (C-Ap)	Divide into pairs, and demonstrate the proper procedures for washing a load of clothes. (Bring a bundle of laundry from home or ask teachers to bring laundry.) Use a checklist to evaluate procedures used.

Behavioral Objectives	Learning and Evaluation Experiences
	Work in pairs, and apply the procedures for using the washing machine. Use a checklist to evaluate.
Cite procedures for using the dryer (C-K)	Observe a demonstration on using the dryer, including 1) loading, 2) reading the dial, 3) setting the control to the correct cycle. What steps are performed in using the dryer?
	Decide what type of clothes can be dried using each cycle. Place clothes in dryer, and select the cycle needed for the type of clothes to be dried.
Identify differences in home laundry equipment and commercial laundry equipment (C-K)	Visit a commercial laundry establishment to learn about laundry equipment. Use information sheet to note such points as size and capacity of machine, amount of water consumed by machine, type of laundry aids used, and types of dispensers, cycles, and lint filters on machines. Fill out the same sheets for equipment in the laboratory. Make a chart showing differences between home and commercial laundry equipment.
Identify various types of starches (C-K)	Observe a display of various types of starches. In what forms is starch found in the stores? Read the labels on starch containers.
	Place a tag naming a type of starch on each class member's back. Each class member can ask others questions which may be answered with "yes" or "no" to determine the type of starch he represents. First to guess the type of starch he represents receives a reward.
Identify garments to be starched or sized (C-K)	Note during field trip to the commercial laundry, which garments need starching or sizing. List for future reference garments and fabrics that are commonly starched. List should include the following: 1) Fabrics with permanent finishes do not require starch. 2) Untreated cottons take light starch. How can the label in a garment help you decide whether a garment needs starch?

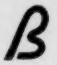
Behavioral Objectives	Learning and Evaluation Experience
Give examples of garments that need starching or sizing (C-C)	Decide which garments from a specific load of laundry need to be starched or sized. Ask your teacher to check your decisions.
Try starching or sizing appropriate garments (P-GR)	Practice proper procedures for starching or sizing the garments selected.
Identify finishing procedures (C-K)	Observe a demonstration on ironing, folding or hanging of garments. Cite the steps in finishing a garment.
Name equipment used in finishing and ironing laundered garments (C-K)	Name equipment seen on field trip, which is used in finishing laundry.
Describe proper finishing procedures (C-C)	Decide on procedures for finishing garments in the laundry load. Explain why you have chosen a particular procedure for a specific garment.
Practice selected finishing procedures (P-GR)	Carry out finishing procedures on garments in the laundry load.

ROAD SIGNS TO LAUNDERING

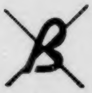
Follow these signs to WASH or DRY-CLEAN and IRON clothes with pleasing results. Look for labels with these simple guides for happier wash-days.



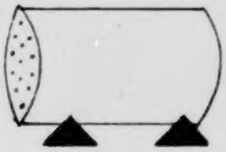
You may wash by machine or by hand



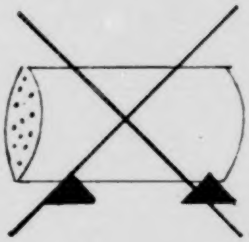
Use bleach carefully



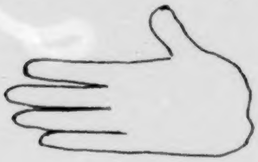
Do not use bleach



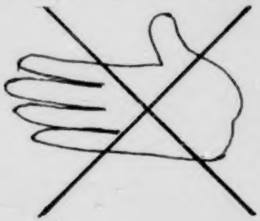
You may dry-clean



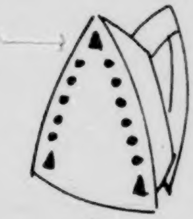
Do not dry-clean



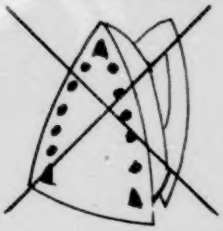
Wash by hand



Do not wash



May be ironed



Do not iron

Recommended Wash Temperature	
160 degrees	hot water with any soap or detergent
120 degrees	medium hot water with any soap or detergent
105 degrees	warm water with mild soap or mild detergent
CW	cold water (lessens the danger of staining and shrinkage)

Recommended Iron Temperature	
H	hot iron
M	medium hot
C	cool iron
S	steam iron

WS	degrees	wash separately (lessens the danger of staining and shrinkage)	L	little or no ironing

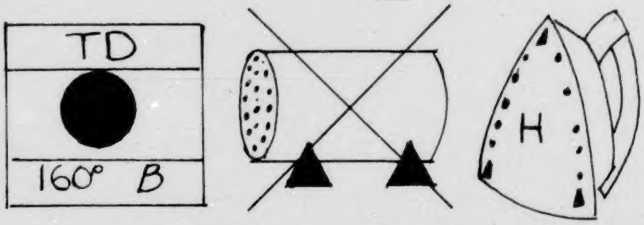
---

Recommended Drying Procedure

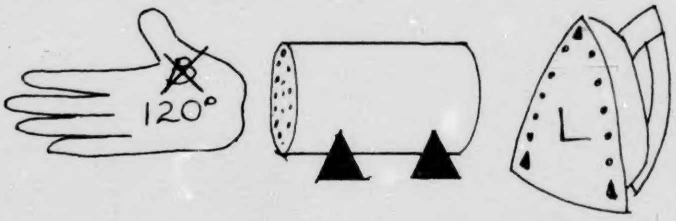
DD	drip dry
TD	tumble dry
DR	dry rapidly (for example remove excess moisture between towels)
SD	spin dry
DF	dry flat
LD	hang on line to dry

The following illustrations show how these symbols might look on lables. Opposite the labels is an explanation of the meaning of the symbols.

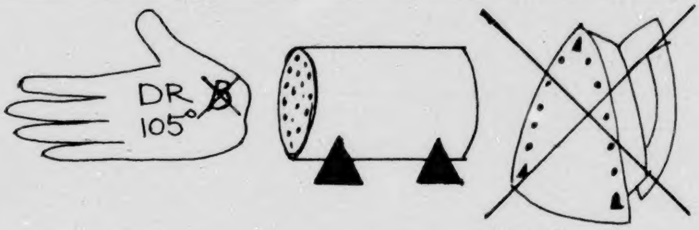
Wash by machine or by hand in hot water with any soap or detergent. Use bleach carefully. Tumble dry. Do not dry clean. Iron with hot iron.



Wash by hand in warm water with any soap or detergent. Do not bleach. Dry-clean. Little or no ironing.



Wash by hand in lukewarm water with mild soap or detergent. Do not bleach. Dry rapidly. Dry clean. Do not iron.



STAIN REMOVAL from Ollie the Owl

Laundry or dry cleaning does not remove all stains. Therefore, garments need to be spotted before they are washed or cleaned.

Before trying to remove a spot, a pre-spotter must decide the following:

1) what caused the stain
2) how to remove the stain
3) whether to use dry or wet solvents

If the customer does not say what caused the spot, there are several ways to identify it:

1) Color of the stain.
2) Appearance of the stain. For example, lipstick and nail polish could be the same color, but lipstitch would pass through the surface of the fabric, while the nail polish would build up on the fabric.
3) Shape of the stain. Oil stains follow the yarns with the least degree of twist. Therefore, if the spot seems to follow one set of yarns, this is an indication that it is an oil stain. If yarns are of equal twist, the stain will be in the shape of a cross.
4) Odor of the stain, e.g., perfume and stain from medicine
5) Location of the stain. Stains in the underarm area of a garment are likely to be perspiration stains. Those on ties or down the front of a garment are often food stains.
6) Feel of the stain. Egg stains are stiff; glue and adhesives are sticky; and paint may be rough or smooth.

After identifying the stain as accurately as possible, the pre-spotter decides whether to use a dry solvent or a water solution to remove the stain. Dry solvents remove stains like paints, oils, ballpoint pen marks, nail polish, and carbon black. Water solutions remove food stains such as egg, milk, ice cream, coffee, tea, fruit juices, and stains from grass, tobacco, wet inks, and mercurochrome.

DRY-CLEANING PROCEDURES

KEY IDEAS: The useful life of a garment is lengthened by proper dry-cleaning.

Stain treatment is essential for proper care of garments.

Clothing accounts for a large part of the budget and must be cared for properly to insure maximum wear.

WORDS TO KNOW:

sorting
prespotting
spotting
solvent
petroleum
tumbling
airing
finishing
lubrication
chemical
digestion

Behavioral Ojbectives	Learning and Evaluation Experiences
Name job opportunities in a dry-cleaning business (C-K)	Tour a dry-cleaning establishment. Be conscious of job positions. How many people are employed? What tasks does each perform? What is each person's title?
Identify processes used in a dry-cleaning operation (C-K)	List and define the dry-cleaning processes from receiving to delivery: receiving, sorting, prespotting, dry cleaning, tumbling or airing, spotting, and finishing. Invite a representative of a dry-cleaning industry (National Institute of Dry Cleaning) to explain these procedures.
State the need for stain removal in a dry-cleaning operation (C-K)	Inspect garments coming into a dry-cleaning establishment. Do they need treating before dry cleaning? Why? Which stains are removed by prespotting before cleaning?
Illustrate the importance of prespotting and spotting (C-C)	Dry-clean grass- and mustard-stained swatches without prespotting. Try removing the stain. Dry-clean stained swatches after prespotting. Is there a difference between the swatches? Why is it important to ask the customer about stains?

Behavioral Objectives	Learning and Evaluation Experiences
Demonstrate the procedures for removal of various stains from a variety of fabrics (C-Ap)	View a demonstration on stain removal by a "spotter" from the dry-cleaning industry. Practice removing various stains from swatches of fabric.
Describe the procedures used in a dry-cleaning establishment (C-C)	Prepare a bulletin board on the dry-cleaning operation, showing the procedures used and the jobs available.
Demonstrate use of dry-cleaning procedures (C-Ap)	Practice using dry cleaning procedures to clean garments provided by the teacher. Use correct dry-cleaning procedures, with students assuming different tasks. (Take clothes to a reputable coin-operated dry cleaners for cleaning.)
Identify "finishing" processes (C-K)	View slides of finishing processes, showing various pieces of pressing equipment being used.

INSPECTION, ASSEMBLING, AND BAGGING

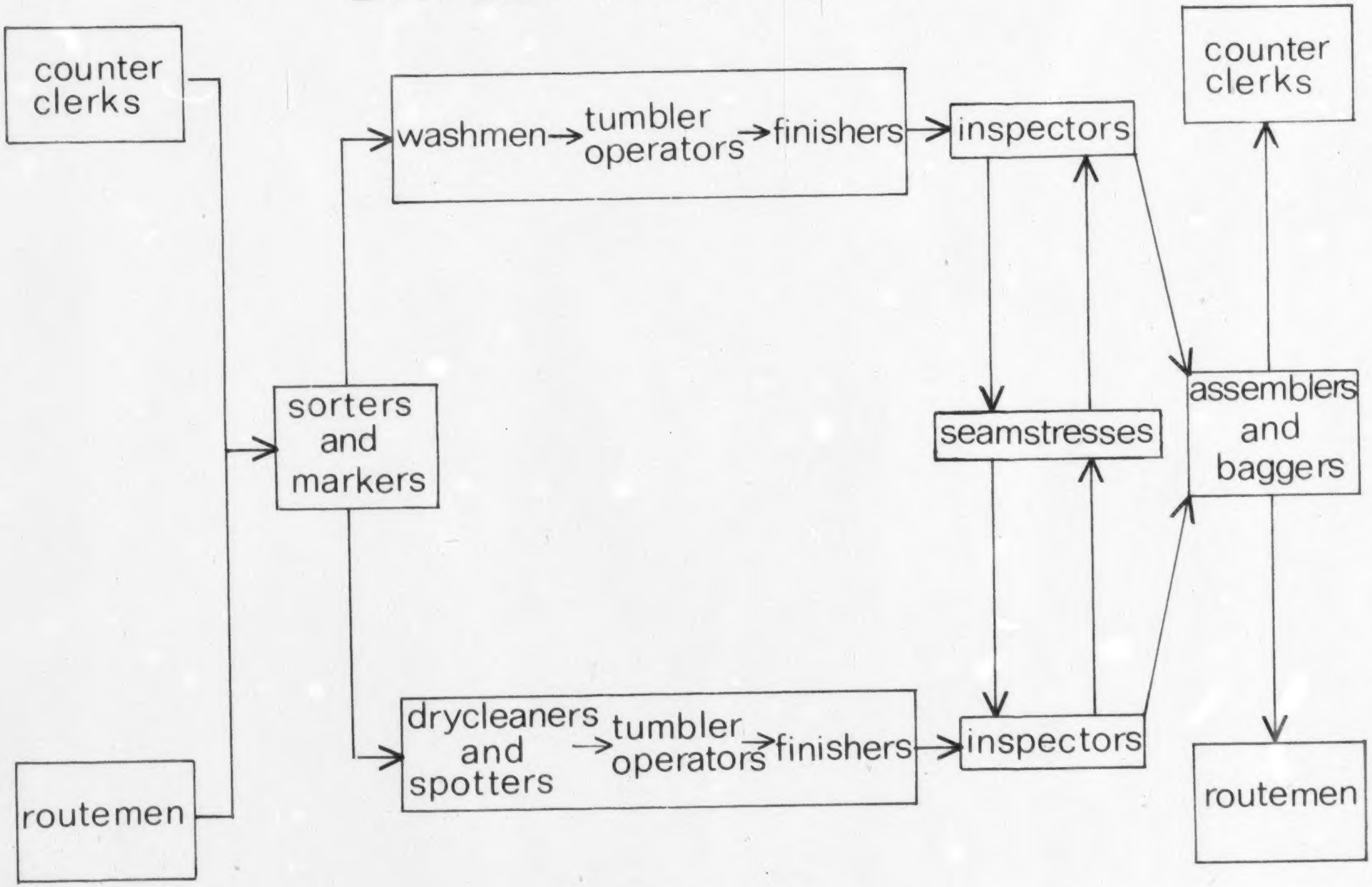
KEY IDEAS:	Inspection of the garment for errors in the cleaning process helps insure customer satisfaction and the establishment's reputation. Inspection of the garment insures that the cleaner will return the garment to the customer in good condition. Proper assembling is necessary to return all items to the correct customers. Bagging protects cleaned clothing from being soiled during delivery.

WORDS TO KNOW: inspection assembling bagging

Behavioral Objectives	Learning and Evaluation Experiences
Recite inspection processes in laundry and dry cleaning establishments (C-K)	Observe the inspection of a garment. Why is the garment inspected? What does the inspector check for? Make a checklist of items to look for in inspecting a garment.
Identify procedures that take place after inspection (C-C)	Study a flow chart of laundry and dry-cleaning procedures to note places a garment can be sent after inspection. Where can garments be sent after inspection?
Carry out inspection procedures (P-GR)	Inspect a garment, using the check list. Are there any spots on the garment? Has removable trim been attached? Have repairs been made?
Name duties of the assembler (C-K)	Observe the assembler in a laundry or dry cleaning establishment as he performs his tasks. How are the garments assembled?
Carry out the assembling and bagging processes (P-GR)	Set up an assembling and bagging post. Practice procedures used in assembling and bagging.
Name duties of the bagger (C-K)	Observe a bagger performing his duties. What are his responsibilities?

Behavioral Objectives	Learning and Evaluation Experiences
Give examples of bagging processes (C-C)	Describe the various methods of bagging. What materials are needed?
Apply in the classroom the procedures used in cleaning garments (C-Ap)	Prepare a flow chart of the commercial laundry processes applicable in the classroom. (See p. 298.) Obtain a bundle of laundry; set up task stations; and demonstrate the processes carried out in a commercial laundry, from receiving to bagging.

HOW WORK FLOWS THROUGH A LAUNDRY AND DRYCLEANING PLANT


counter clerks
routemen
sorters and markers
washmen
tumbler operators
finishers
drycleaners and spotters
tumbler operators
finishers
inspectors
seamstresses
inspectors
assemblers and baggers
counter clerks
routemen

CONCEPT: Packing and Storing Clothes

JUSTIFICATION:

Persons employed as housekeepers may be involved in packing and storing clothes for their employers. Employees in dry cleaning establishments may be responsible for storing customers' out-of-season garments. Knowledge of appropriate procedures to follow in packing and storing clothes are essential in preventing damage to someone else's garments.

OVERALL OBJECTIVES:

Cite procedures for packing and storing apparel (C-K)

Pursue additional information on packing and storing apparel (A-Res)

Follow acceptable procedures for packing and storing apparel (P-GR)

SUPPLIES FOR STORING APPAREL

KEY IDEAS: Supplies are available for protecting garments during storage.

Appropriate products may prevent damage by insects and mildew.

Behavioral Objectives	Learning and Evaluation Experiences
Identify supplies used in storing clothes (C-K)	Visit a drycleaning establishment to observe supplies used for commercial storage of clothes, or invite a representative to bring these articles to class. What types of containers are used?
	View a display of supplies which may be used in storing apparel at home. Why should white tissue paper be avoided in storage?
Describe purposes of various supplies used in storing apparel (C-C)	Observe demonstrations on storing apparel commercially and at home. Explain how various supplies are used in storing apparel.
List products which aid in preventing damage to stored apparel (C-K)	Ask a drycleaner how damage by mildew, moths, and other insects is prevented in commercially stored apparel.
	View a display of products used to prevent damage to garments stored at home. List the types of products used.
Cite reasons for using special chemical preventatives in storing apparel (C-C)	Explain why precautions must be taken to prevent damage to stored garments. What may happen if no precautions are taken?
Discover value of preventative products used in storing garments (C-Ap)	Work in committees to investigate commercial preparations used to kill moths or silverfish, or to prevent mildew. Compare costs of the products. Compare procedures for using the products.

SEASONAL STORAGE

KEY IDEAS: Proper seasonal storage contributes to a longer life and better appearance of a garment.

Commercial storage of garments may be advantageous in some situations.

Proper storage protects clothes from dust, dirt, insects, and mildew.

Behavioral Objectives	Learning and Evaluation Experiences
Identify procedures used in commercial storage of garments (C-K)	Take a field trip to an establishment which has storage for out-of-season apparel. Observe procedures for storing furs, coats, suits, and winter dresses. Ask questions such as the following: How much does it cost to store garments? When are garments cleaned and pressed? How are they stored?
Illustrate procedures used in commercial storage of garments (C-C)	Make a chart showing the steps involved in commercial storage of various garments. Compare your chart with those of classmates. Develop a class poster showing steps in commercial storage of garments.
Practice procedures involved in commercial storage of garments (P-GR)	Use actual garments, and practice procedures used in storing them commercially.
Determine advantages and disadvantages of commercial apparel storage (C-An)	Discuss advantages and disadvantages of storing apparel commercially, such as cost, expertise of cleaner, and space.
Identify procedures for preparing home storage space (C-K)	View a demonstration on preparing home storage space for storing out-of-season garments. How should closet, trunk, drawers, or boxes be prepared?

Behavioral Objectives	Learning and Evaluation Experiences
List steps in preparing and storing washable garments (C-K)	View a demonstration on preparing and storing washable garments. Why are garments washed before storing? Why are garments stored unstarched? Why should bluing be thoroughly rinsed from garments to be stored? List steps in packing garments flat in boxes. What procedures are used if garments are stored hanging?
Cite procedures for storing woolens at home (C-K)	View a demonstration on storing woolens at home. Why should woolens be cleaned and brushed before storing? Why are moth preventatives used when storing woolens? List steps in storing woolens flat in a box, drawer, or trunk. List procedures for storing woolens hanging in a garment bag.
Cite procedures for home storage of nonwashable garments (C-K)	View a demonstration on storing nonwashable garments. Why are they hung rather than stored flat? Why should moth preventatives be used even if the garment contains only a small amount of wool?
Illustrate procedures for storing garments at home (C-C)	Make a chart showing how to prepare and store washable garments, woolens, and nonwashable garments. List general procedures which apply to storing any garment.
Practice procedures used in preparing and storing garments at home (P-GR)	Practice preparing and storing various garments as they would be stored at home.

PACKING FOR TRAVEL

KEY IDEAS: Careful packing insures that clothing arrive at their destination in good condition.

Use of appropriate supplies and procedures prevents wrinkling of garments.

Packing in layers makes garments easier to find.

Behavioral Objectives	Learning and Evaluation Experiences
Identify procedures for getting ready to pack (C-K)	View a demonstration on getting ready to pack. What supplies are needed for packing? How can you estimate the size and number of suitcases needed? How can you be sure all needed items will be packed? List steps in getting ready to pack.
List steps in folding garments for packing (C-K)	Watch a demonstration on folding garments for packing. List steps in folding a dress or skirt, a coat or jacket, trousers or slacks, and a blouse or shirt. Where is tissue paper used in each?
Cite procedures for preparing small articles for packing (C-K)	Watch a demonstration on prepacking small articles. How are such articles as toiletries, shoes, hose, and small items of apparel prepared for packing? Why are mending supplies included?
Carry out prepacking procedures (P-GR)	Work in teams to practice procedures for getting ready to pack, using apparel and supplies provided by teacher.
List procedures for packing suitcases and garment bags (C-K)	Watch a demonstration on packing clothes in suitcases and garment bags. How does packing in layers help prevent wrinkling? Of what may dividers between layers be made? Why are heaviest articles placed in the first layer?
Explain how to pack in layers (C-C)	Describe procedures for packing in layers. Which items are placed in each layer? What differences are there between packing for men and for women?

Behavioral Objectives	Learning and Evaluation Experiences
Illustrate various packing aids (C-C)	Prepare an exhibit of packing aids. Show both homemade and purchased items.
Pursue additional information on packing (A-Res)	Collect packing hints from newspaper or magazine articles or from literature from travel agencies and petroleum companies.
Follow acceptable procedures for packing (P-GR)	Practice packing a large suitcase, a suitcase and a garment bag, or two suitcases, following acceptable procedures. Ask a classmate to check your work. Was the bag too full or not full enough? Was it packed in layers? Were appropriate aids used?

SECTION THREE

CVAE CLOTHING LABORATORY

Suggestions for CVAE Clothing Laboratory Experiences

Experiences should be planned to give students practical experience in all aspects of CVAE Clothing Services, including custom clothing construction, assembly-line production, repair and alteration, laundry and dry cleaning, and packing and storing. The following suggestions should assist the CVAE homemaking teacher in planning a variety of experiences to make students employable in each area of clothing services.

Sources of Fabric

Most clothing construction projects require fabric. In order to provide as many experiences as possible, the teacher will want to locate as many free and inexpensive sources of fabric as possible. Free sources might include remnants from a clothing store, scraps from a garment manufacturer, mill ends or seconds from a textile mill, scraps donated by home seamstresses or dressmakers, scraps from upholstery shops, or discarded garments from home. Fabric purchased by a church group or club might be used to make garments for charity--for example, for children in a local children's home or for a needy family or individual. Fabric purchased by a church or club might be used for construction of clothing and accessories to be sold at a boutique sponsored by the group to raise money for charity or projects. Fabric might be obtained inexpensively at fabric sales, remnant counters, mill outlets, discount stores, wholesalers, and unclaimed freight stores.

Custom Clothing Construction

One of the most important aspects of custom clothing construction is the opportunity to work with actual customers. In the beginning, CVAE students could construct simple garments for one another to gain experience. Parents, teachers, or other individuals could bring their own fabric, come for fittings, etc., just as actual customers would. The teacher might encourage those who serve as "customers" to choose simple patterns and inexpensive fabrics until students become skilled. Students could also gain experience in custom clothing construction by working with the school drama department to construct costumes for plays or coveralls for stage hands.

Assembly-Line Production

Any garment or accessory needed in quantity can be produced using assembly-line techniques. Simple projects are most readily adaptable for classroom projects because of equipment limitations. Assembly-line projects could be produced for a church or club boutique with the sponsoring organization furnishing all the materials and retaining any profits. Items could be produced as a fund raising project for FHA or for a school project such as a band trip or PTA project. Assembly-line projects could be undertaken to produce needed items for school classes. Such projects might include artists' smocks, shop aprons, aprons for homemaking classes, choir robes, pep squad uniforms, P.E. uniforms, "pennies" for gym classes, or aprons for cafeteria workers.

Numerous commercial patterns are available which may be adapted for use in assembly-line production. Patterns available include handbags, belts, hats, caps, spats, robes, aprons, ponchos, capes, caftans, smocks, layettes, lingerie, pajamas, house dresses, beach coverups, hostess skirts, and simple children's garments. Additional patterns may be found in fashion and home magazines and in the newspaper. Patterns may be exchanged with other CVAE homemaking teachers. The teacher may make her own pattern by disassembling a garment or accessory and cutting her own pattern, or by measuring and drawing a pattern.

A sample plan for making a purse with a flap, using assembly line production techniques is included on pp. 308-318 to assist the teacher in planning assembly-line projects. The plan illustrates all phases of planning necessary to carry out the project, so that additional projects may be planned by the teacher.

Alterations and Repair

To provide practice in alteration and repair, garments which require these services must be obtained. Classmates might exchange outgrown or seldom-worn garments. Garments could then be repaired and altered to fit their new owners. Class might volunteer to repair garments donated to a church or club charity, or repair donated maternity clothes and lend them to expectant mothers. Upon the arrival of the infant, they might send the mother a congratulatory note and suggest that she return the borrowed maternity garments for another expectant mother's use, or students might repair donated children's garments and lend them to mothers for their children to wear until the clothes are outgrown. Mothers might be asked to donate one outgrown garment for each "new" garment they select.

Laundry and Dry Cleaning

The class could launder and dry-clean garments to be donated to charity for the sponsoring church or organization. The children's and maternity clothes collected for loan should be laundered when received and before each redistribution. Custodian's uniforms, gym uniforms and towels, artists smocks, cafeteria workers' uniforms and aprons, choir robes, homemaking aprons, or shop aprons could also be laundered. Clothing to be laundered might also be supplied by teachers or parents.

Packing and Storing

Limited opportunity may be available for providing practical experience in this area. The children's or maternity garments not currently on loan could provide an opportunity for students to follow proper procedures for storing garments.

PURSE WITH A FLAP

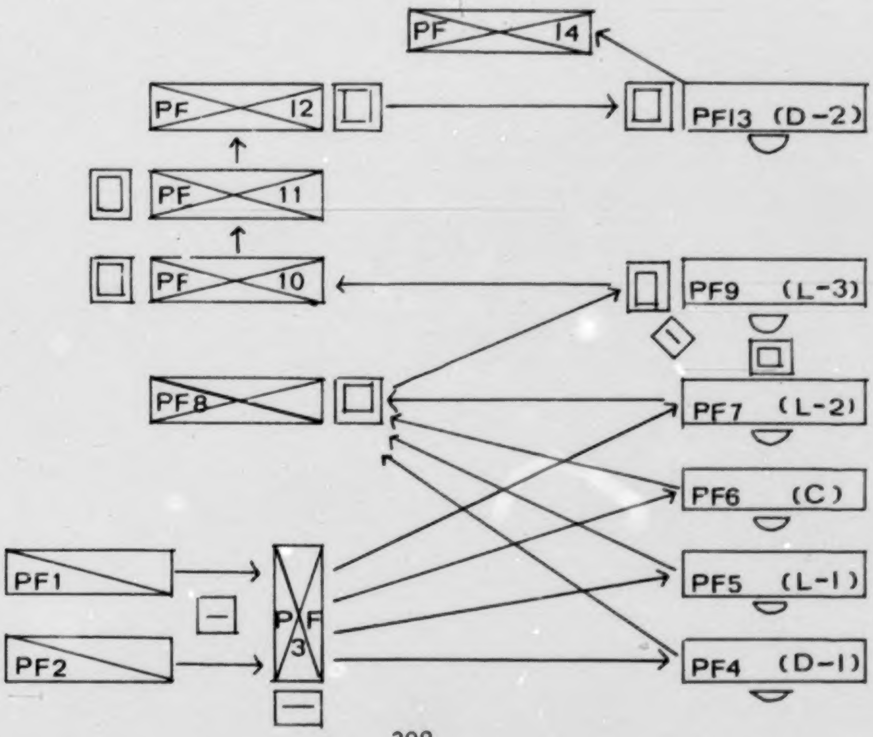
Materials:

Fabric for four complete bags: 1-5/6 yards of 54-in.-wide fabric
Thread
Lining fabric: 1-1/8 yards of 36-in.-wide fabric or 8 pieces 10 by 13 inches each
Cardboard for bottoms of purses
White glue
2 metal rings for each purse (opt.) about 1-1/2 in. in diameter
Clasps
Case cutter or buttonhole scissors
Pliers

Equipment Layout:

Legend:

▽ - Operator seated
L - Lockstitch sewing machine
D - Domestic sewing machine
C - Chainstitch machine
⧄ - Cutting table - (Tables used to eat on in CVAE Foods or student study tables could be used here.)
☒ - Work tables - (Tables used to eat on in CVAE Foods or student study tables could be used here.)
⊟ - Movable carts - (Kitchen carts could be used for this.)
▣ - Bins - (Shop boys could build boxes on casters to use for bins.)

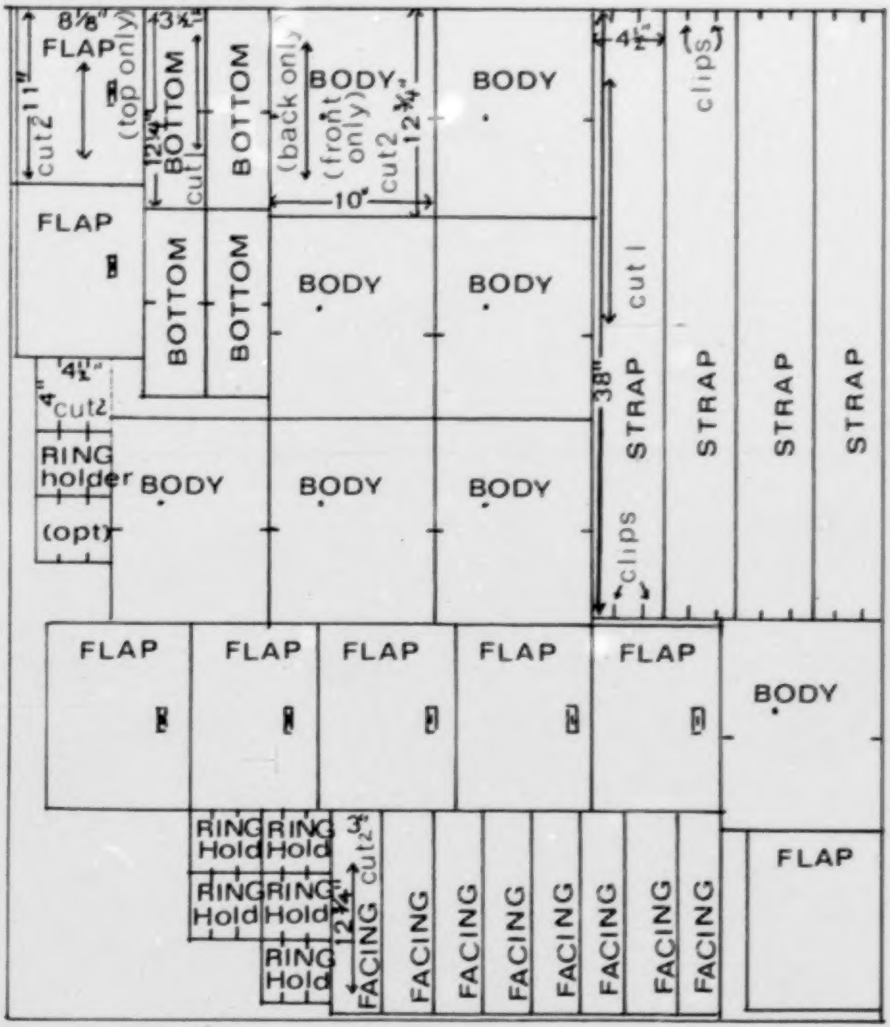


Making the Pattern:

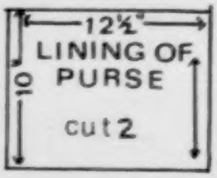
Make a hard pattern for each of the following pattern pieces using cardboard:

Body - 12-3/4 in. by 10 in.
Flap - 11 in. by 8-1/8 in.
Bottom - 12-1/8 in. by 3-1/2 in.
Facing - 12-3/4 in. by 3 in.
Strap - 4-1/2 in. by 38 in.
Short Strap (opt.) - 4-1/2 in. by 22 in.
Ring Holders (opt.) - 4-1/2 in. by 4 in.
Lining - 12-3/4 in. by 10 in.

Making the Marker:


8⅛"
FLAP
(top only)
cut2
11"
3½"
BOTTOM
12¼"
cut1
BOTTOM
BODY
(back only)
(front only)
cut2
12¾"
10"
BODY
FLAP
BOTTOM
BOTTOM
BODY
BODY
4½"
4"
cut2
RING holder
(opt)
BODY
BODY
BODY
4½"
clips
cut 1
38"
STRAP
STRAP
STRAP
STRAP
clips
FLAP
FLAP
FLAP
FLAP
FLAP
BODY
RING Hold
RING Hold
RING Hold
RING Hold
RING Hold
3"
cut2
12¾
FACING
FACING
FACING
FACING
FACING
FACING
FACING
FLAP

Layout for 4 Purses
54" fabric 62"


12½"
10
LINING OF PURSE
cut2

Cutting the Fabric:

If cutting two plies at one time, make a marker on top ply. Cut as many layers as cutter can handle efficiently. Test cut to determine the number of plies to cut at one time.

Marking:

Clips or notches are used to designate matching points.

Position of clasp on flap and front body can be marked with a ballpoint pen.

Assembling:

Assemble pieces in bundles of eight. Stack together bundles which go to each operator. Attach a card to each bundle for identification. Example: Flap. Place bundles on the movable cart. Prepare tickets so each person can cut off the portion related to his task upon completion of a bundle.

Bundle Handler:

Distribute bundles to appropriate operators. Work out exact procedures for handling the "flow" of work. Determine exact procedures for handling bundles. For example, bundles should be received by operator in the sequence to be sewn, which may mean they need to be turned over between operations.

Constructing:

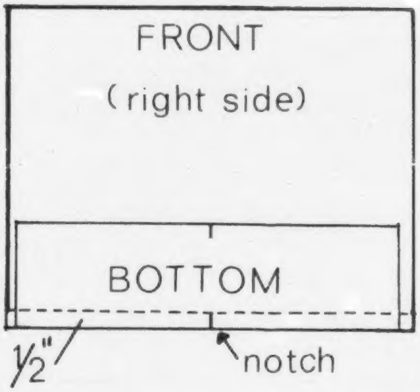
Conduct a "method" analysis of each operator's task. For example:

1. Get. (Pick up top two layers of stack which consists of front and back of lining with right sides together from left front of sewing table within easy reach.)
2. Check alignment of plies. Insert. (Place plies under the foot).
3. Backstitch. Line up work. (Check edges and get set for the sewing stroke.)
4. Sew seam. (Sew to corner in one stroke; pivot; sew to stopping point in one stroke; backstitch; raise presser foot; clip threads; reposition under foot at second starting point; backstitch; sew to corner in one stitch; pivot; sew to second stopping point in one stroke; backstitch.)
5. Stop and remove work.
6. Clip threads.
7. Repeat for other corner.
8. Dispose. (Make stack of completed linings on left back corner of sewing table within easy reach.)

Steps in Constructing Purse with Flap

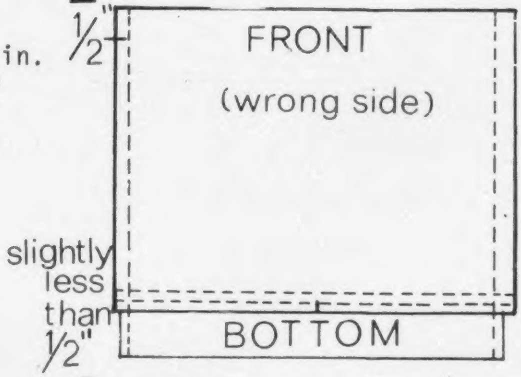
1. With right sides together, match notches, on BOTTOM and BODY FRONT (ends will not match). Stitch 1/2 in. from raw edges. Understitch. Repeat procedure with BOTTOM and BODY BACK.

1


FRONT
(right side)
BOTTOM
1/2"
notch

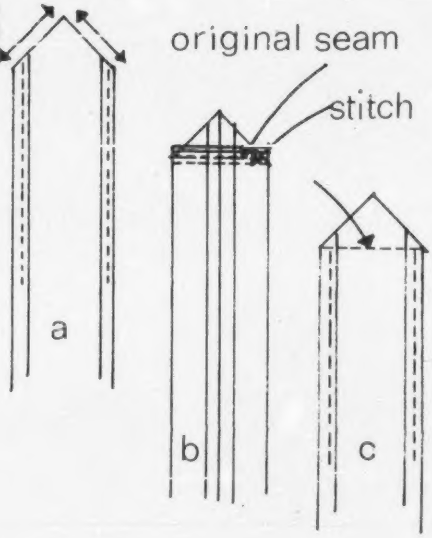
2. Fold purse with right sides together, matching seams. Stitch side seam 1/2 in. bottom to top. (Seam will be slightly less than 1/2 in. on bottom.) Stitch each seam twice.

2


1/2"
FRONT
(wrong side)
slightly less than 1/2"
BOTTOM

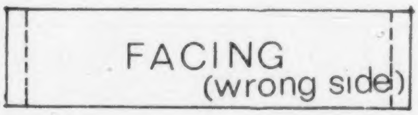
3. (a) With purse wrong side out, form triangle at each corner of BOTTOM and BODY. Check to be sure the point of the triangle equally divides the distance on the BOTTOM side. (b) Hold in place, and carefully turn to the purse side. Open the side seam. Stitch in a straight line from edge to edge, outside previous rows of stitching. (c) Check to be sure line is straight on BOTTOM side, and restitch. Repeat procedure for other side of purse.

3


original seam
stitch
a
b
c

4. With right sides together, stitch the ends of the FACING, making a 1/2 in. seam.

4

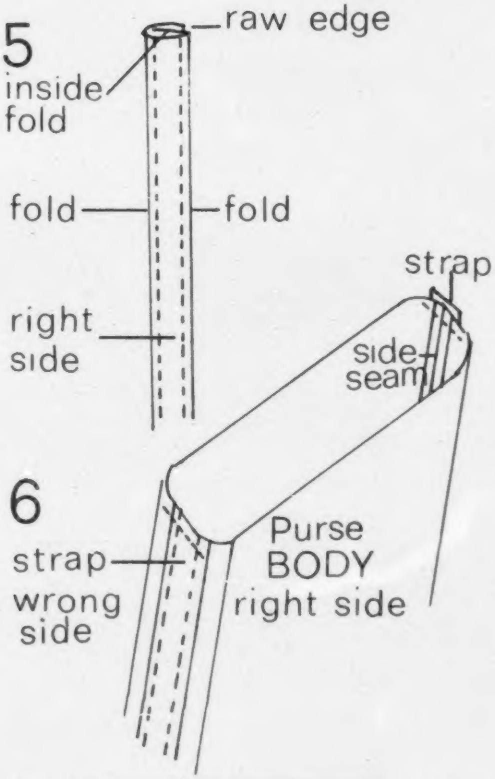

FACING
(wrong side)

5. Fold STRAP in thirds using the clips as guides. Top-stitch on the right side of strap, stitching side with raw edge underneath first. Turn and stitch the other edge the same distance. Trim raw edge if it shows from the right side.

6. With right sides together, match center of STRAP to BODY side seam and stitch 1/2 in. from raw edges to secure it. Be sure to match right side of STRAP to right side of purse body and do not twist.

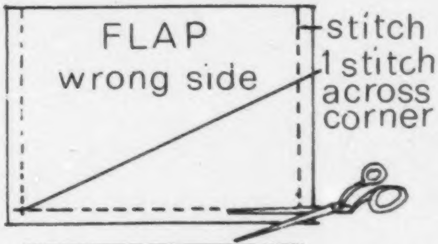
5

6


raw edge
inside fold
fold
fold
right side
strap
side seam
strap
wrong side
Purse BODY right side

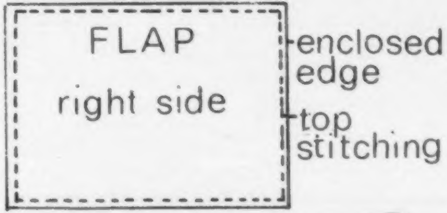
7. Match the two FLAP pieces with right sides together and stitch 1/2 in. from raw edges on three sides, leaving top open. (Take one stitch across corner to allow room for turning.) Stitch twice. Trim edges, and cut across the corners for sharp point.

7


FLAP
wrong side
stitch
1 stitch across corner

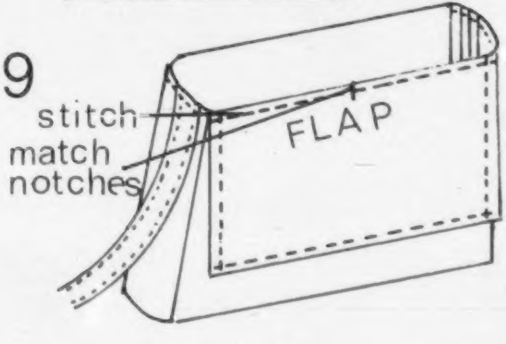
8. Turn FLAP right side out. Top-stitch around all four sides.

8


FLAP
right side
enclosed edge
top stitching

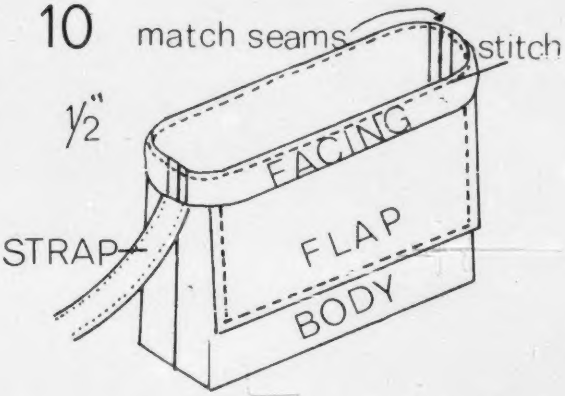
9. Match notches on FLAP and BODY BACK right sides together, and stitch.

9


stitch
match notches
FLAP

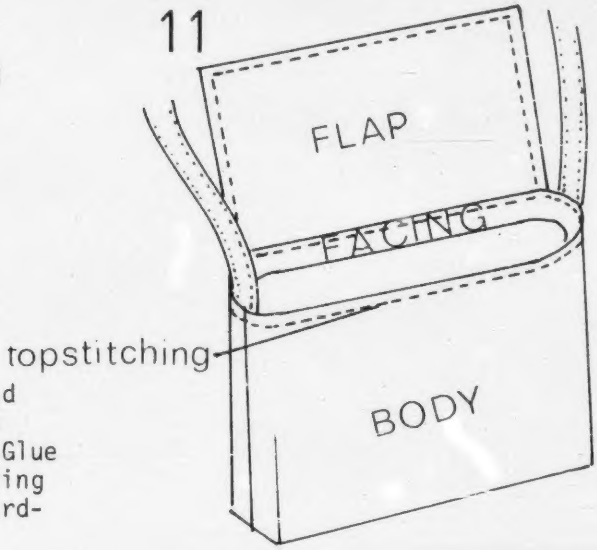
10. Match FACING seams to purse side seams. Stitch 1/2 in. from raw edges around the top edge. Stitch one-fourth of the way around. Stop. Match next side seam. Stitch next fourth. Stitch to end. Stitch again.

10


match seams
stitch
1/2"
FACING
FLAP
STRAP
BODY

11. Turn FACING to the inside. Using the presser foot as a guide, top-stitch around the top of the purse.

11

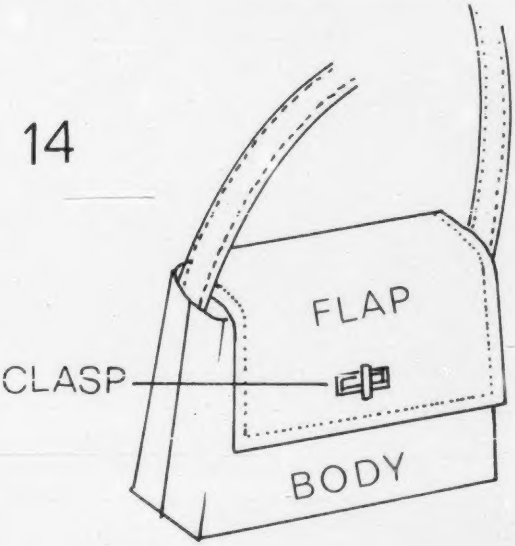

FLAP
FACING
topstitching
BODY

12. Cut cardboard the shape and just slightly smaller than the BOTTOM of the purse. Glue to the inside bottom, leaving triangles on top of the cardboard.

13. Position CLASP over marking on the FLAP. Trace with pencil around the inside edge of the CLASP. Cut this area out with the case cutter and insert the CLASP. It may be necessary to trim excess fabric. Attach back of CLASP and secure.

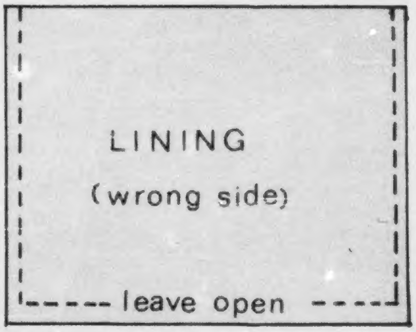
14. Position other section of CLASP over marking on the BODY FRONT. Push CLASP through fabric, attach the back, and secure.

14


FLAP
CLASP
BODY

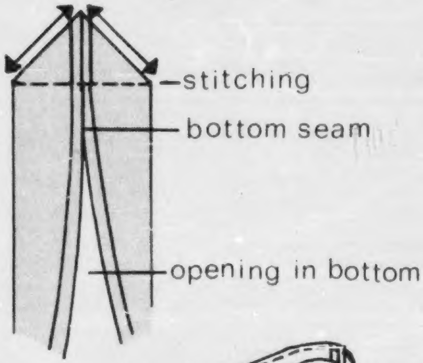
1. With right sides together, stitch LINING side seams 1/2 in. from raw edges, turning corners at the bottom, and stitch about 2 in. from both corners toward the center.

L1


LINING
(wrong side)
leave open

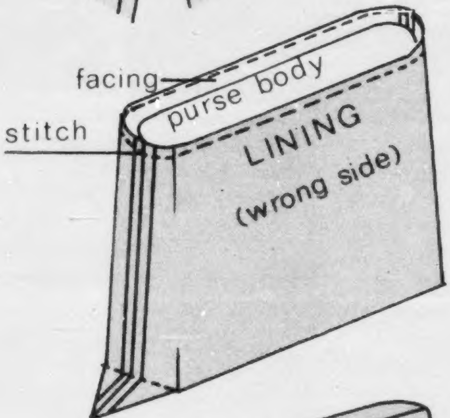
2. Form triangles as previously done, and stitch across each twice.

L2


stitching
bottom seam
opening in bottom

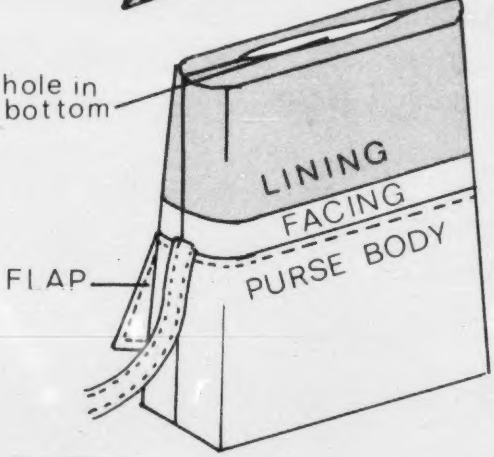
3. Place purse inside the lining, with facing extended, right side of purse to right side of lining. Match side seams and raw edges. Stitch LINING to FACING 1/2 in. from raw edge.

L3


facing
purse body
stitch
LINING
(wrong side)

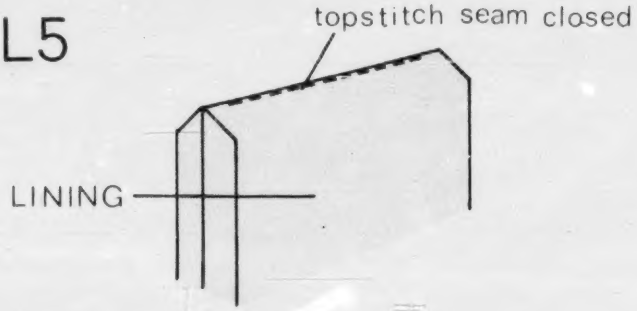
4. Pull purse body through hole in bottom of lining.

L4


hole in bottom
LINING
FACING
PURSE BODY
FLAP

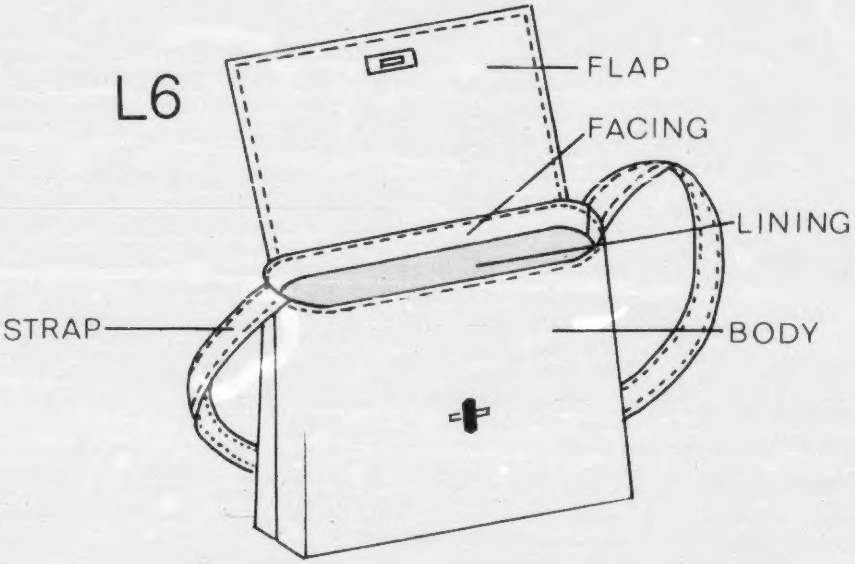
5. Fold bottom of lining on seam line, with seam allowances inside. Top-stitch seam closed stitching close to edge.

L5


topstitch seam closed
LINING

6. Push lining and facing into purse.

L6


FLAP
FACING
LINING
STRAP
BODY

PURSE WITH A FLAP

Worker	Equipment	Task
PF1 Marker--purse body	Hand tools	Make a marker Draw pattern on vinyl
Cutter--purse body	Hand tools	Cut purse out Make notches, etc. for joining the purse Shade-mark
PF2 Marker--lining	Hand tools	Make a marker Draw pattern on lining
Cutter--lining	Hand tools	Cut lining out Make notches, etc. for joining lining Shade-mark
PF3 Assembler	Hand tools	Bundle and tag pieces
PF4 Sewing machine operator	Domestic sewing machine No. 1	Make lining, leaving opening in the bottom
PF5 Sewing machine operator	Lockstitch machine No. 1	Match two flap pieces Stitch twice leaving top open Trim edges and clip corners for sharp point Turn flap right side out Top-stitch around all four sides
PF6 Sewing machine operator	Chainstitch machine (Use one needle so it will look like lockstitch.)	Stitch bottom to sides Understitch each side of bottom Stitch side seams twice Fold triangle and stitch to make side of bottom
PF7 Sewing machine operator	Lockstitch machine No. 2	Stitch facings together on one side, leaving in a chain Pull back chain Stitch other side of facings together, leaving a chain Pull back chain, cut apart, and stack Make a strap for handle, following same procedures as for facings. Make ring holders, following same procedures as for facings.

PURSE WITH A FLAP

Worker	Equipment	Task
PF1 Marker--purse body	Hand tools	Make a marker Draw pattern on vinyl
Cutter--purse body	Hand tools	Cut purse out Make notches, etc. for joining the purse Shade-mark
PF2 Marker--lining	Hand tools	Make a marker Draw pattern on lining
Cutter--lining	Hand tools	Cut lining out Make notches, etc. for joining lining Shade-mark
PF3 Assembler	Hand tools	Bundle and tag pieces
PF4 Sewing machine operator	Domestic sewing machine No. 1	Make lining, leaving opening in the bottom
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PF7 Sewing machine operator	Lockstitch machine No. 2	Stitch facings together on one side, leaving in a chain Pull back chain Stitch other side of facings together, leaving a chain Pull back chain, cut apart, and stack Make a strap for handle, following same procedures as for facings. Make ring holders, following same procedures as for facings.

Worker	Equipment	Task
PF8 Inspector	Hand tools	Inspect and trim work Return work to original operator for repairs
PF 9 Sewing machine operator	Lockstitch machine No. 3	Stitch straps or ring holders to purse Stitch flap to purse Stitch facing to purse Top-stitch around purse on facing and side Stitch lining to facing
PF10 Inspector	Hand tools	Inspect and trim work Return work to original operator for repairs
PF11 Marker-cardboard	Hand tools	Draw purse bottom on cardboard
Cutter-cardboard	Hand tools	Cut cardboard for purse bottom Glue cardboard in bottom of purse
PF12 Hand finisher	Hand tools	Cut hole for clasp Attach clasp to the purse
PF13 Sewing machine operator	Domestic sewing machine No. 2	Stitch lining opening closed
PF14 Inspector		Check to maintain quality of the purse Put tissue paper or blank newsprint in purse to hold shape Package and prepare for shipping
PF15 Supervisor (floats)		Oversee all tasks in purse making
Bundle handler		Move bundles from one operator to the next as needed

REFERENCE LIST
FOR
CLOTHING SERVICES

1974

Prepared and Distributed by

Home Economics Instructional Materials Center
Texas Tech University
Box 4067
Lubbock, Texas 79409

Directed by

Texas Tech University
College of Home Economics
Department of
Home Economics Education
Lubbock, Texas

In cooperation with

Texas Education Agency
Department of Occupational
Education and Technology
Homemaking Education
Austin, Texas

STUDENT REFERENCES

Butman, Grace A. New Fabrics, New Clothes, & You. Austin, Texas: Steck-Vaughn Company, 1966. 92 pp. ($1.44. Easy reading on three cloth families, textile terms, finishes, and tags; chart on facts about fabrics.)

Hanson, Margaret J. The Care We Give Our Clothes. Austin, Texas: Steck-Vaughn Company, 1966. 94 pp. ($1.44. Easy reading on daily, weekly, and seasonal care of clothes, remodeling clothes, and storage of clothing.)

Piltch, Benjamin. Mack Works in a Clothing Factory. Phoenix, New York: Frank E. Richards Publishing Co. Inc., 1971. 60 pp. ($1.50. Simply written in dialogue form. Contains some games, puzzles, and exercises.)

Power Sewing. New Brunswick, New Jersey: Vocational-Technical Curriculum Laboratory, 1971. 261 pp. ($2.00. Safety and care of power sewing machine, single-needle lockstitch machine, primary sewing operations, single-needle sewing projects, zig-zag machine, two-needle lockstitch machine, special machines, pressing, handling at work, repairs, folding and counting. Easy reading.)

Replacing a Zipper. Washington, D.C.: U.S. Department of Agriculture, 1966. 7 pp. (Free. Easy reading with detailed illustrations.)

Sewing by Hand. Washington, D.C.: U.S. Department of Agriculture, 1966. 11 pp. (Free. Easy reading with detailed illustrations.)

Shannon, Terry. About Ready-to-Wear Clothes. Chicago, Illinois: Melmont Publishers, Inc., 1961. 31 pp. ($2.50. Very simple terms. Fairly large print. Takes the garment manufacturing process from history of clothing and ready-to-wear to designing through shipping of garments.)

Singer Student Manuals. Somerville, New Jersey: The Singer Company, n.d. 24 pp. (Free. Written in easy to understand terms. Titles include Know Your Industrial Sewing Machine, How to Prepare and Care for an Industrial Sewing Machine, How to Operate an Industrial Sewing Machine, and How to Build Industrial Sewing Skills.)

When You Go To Work. New Brunswick, New Jersey: Vocational-Technical Curriculum Laboratory, 1968. 200 pp. ($2.42. The factory, the time clock, the time card, the workroom, the production line, piece work, the paycheck, characteristics of a good worker, the job, shop mathematics, clothing for women, and clothing for men. Easy reading.)

Wool, John D. and Bohn, Raymond J. Learning About Measurement. Phoenix, New York: Frank E. Richards Publishing Co. Inc., 1969. 64 pp. ($1.50. Simple language. Kinds of measurement, tools of measurement, the ruler, liquid measurement, solid measurement, other measures, measuring temperature, time as a measurement, and table of measurement.)

BOOKS

The Art of Sewing. New Brunswick, New Jersey: Vocational-Technical Curriculum Laboratory, n.d. n.p. ($2.50. Basic Information on hand sewing, stitches, seams, hems, bias binding, facing, inserts and appliques, buttonholes, pockets, and plackets.)

Bane, Allyne. Creative Clothing Construction. 3rd ed. New York, New York: McGraw-Hill Book Co. Inc., 1973. 329 pp. ($10.95. Equipment, commercial patterns, fabric, cutting, marking, construction.)

Bane, Allyne. Tailoring. 2nd ed. New York, New York: McGraw-Hill Book Company, 1968. 333 pp. ($9.65. Equipment, pattern selection, fabric selection, preparation of fabric, alteration of pattern, muslin, cutting, marking, staystitching, construction, pressing, fitting, tailoring, interfacing, underlining, lining.)

Carlin, David. Alteration of Men's Clothing. 3rd ed. New York, New York: Fairchild Publications, Inc. 1962. 112 pp. ($5.95. Terms; fitting; alteration of sleeves, collar, shoulders, coat, vest, trousers.)

* Craig, Hazel Thompson. Clothing, A Comprehensive Study. New York, New York: J.B. Lippincott Company, 1968. 468 pp. ($7.32. Good reference on garment industry, textiles, care of clothing, careers in clothing and textiles, construction of clothing.)

"Dress Design" The Problem Figure. New Brunswick, New Jersey: Vocational-Technical Curriculum Laboratory, n.d. n.p. ($1.75. The fashion figure, principles of design, lines and the figure, designing for the problem figure, textured fabrics for the figure with a problem, and designing for your individual figure.)

Dry Cleaning and Pressing--A Suggested Training Course. New Brunswick, New Jersey: Vocational-Technical Curriculum Laboratory, 1968. 62 pp. ($1.00. Dry-cleaning equipment and procedures, and pressing.)

Dunn, Lucille; Bailey, Anetta; and Vansickle, Wanda. Steps in Clothing Skills. Peoria, Illinois: Charles A. Bennett Co. Inc., 1970. 528 pp. ($8.80. Includes fabric selection, clothing construction, and home economics-related jobs.)

Fashion Fabrics. New Brunswick, New Jersey: Vocational-Technical Curriculum Laboratory, n.d. n.p. ($3.75. Covers textile science and background information on various aspects of fabrics. Contains student workbook.)

Fibers and Fabrics. Austin, Texas: The Instructional Materials Laboratory, 1967. 288 pp. ($3.00. Manufacture of fabrics, natural and man-made fibers.)

* State adopted textbooks.

Gaetan, Manuel. Sewing Machine Operator's Training Handbook. Columbia, South Carolina: Bobbin Publications, 1972. 121 pp. ($8.75. Training in the needle trades industry. Tables, illustrations, forms and photographs.)

Hannan, Watson M. The Methods of Sewing. Great Neck, New York: Kogos Publications/Apparel Institute, 1963. 75 pp. ($5.00. Industrial sewing procedures, bringing work to the operator, moving work to the machines, the sewing operator, finished work disposal, method improvement, sewing machine maintenance, glossary of manufacturing and sewing machine terms.)

Henry, Sarah T. A Training Program in Garment Alterations. Lexington, Kentucky: University of Kentucky, 1967. 35 pp. (n.c. This program was planned and tested at Northern Kentucky State Vocational School, Covington, Kentucky. Includes course outline, resources used, and record sheets for the course.)

Home and Community Services. Stillwater, Oklahoma: Curriculum and Instructional Materials Center, 1972. 621 pp. ($12.00. Basic information, assignments, and tests for program using home-type equipment. Includes child care services, clothing services, food services, consumer education, and household maintenance. Good transparency masters.)

Home Economics Instructional Materials Center. Clothing Assistant. Lubbock, Texas: Tech Press, 1969. 439 pp. ($7.50 in Texas; $10.00 out-of-state. Order from Home Economics Instructional Materials Center. Covers fitting ready-made clothing; selection, use and care of equipment; alteration of men's and women's clothing; clothing repairs; pressing; dry cleaning; record keeping; and fabric characteristics.)

Home Economics Instructional Materials Center. Orientation to the World of Work, Parts I & II. Lubbock, Texas: Tech Press, 1971. Part I-219 pp., Part II-212 pp. (Each $5.00 in Texas and $6.50 out-of-state. Order from Home Economics Instructional Materials Center. Units on HECE, FHA, labor, money, job application, job success, civic responsibilities, understanding our economy, personal management and consumer education, personal adjustment, planning for future, and evaluation.)

Industrial Needle Trades. New Brunswick, New Jersey: Vocational-Technical Curriculum Laboratory, 1961. 306 pp. ($2.50. Basic textiles, general manufacturing procedure, the sewing machine, primary sewing machine orientation, attachments, finish stitching, automatic machines, nonsewing factory operations, cutting room procedures, and production efficiency.)

Iowa Home Economics Association. Unit Method of Clothing Construction. 5th ed. Ames, Iowa: Iowa State University, 1972. 130 pp. ($4.50. Construction and tailoring are discussed and illustrated.)

Johnson, Mary. Mary Johnson's Guide to Altering and Restyling Ready-Made Clothes. New York, New York: E.P. Culton and Co. Inc., 1964. 251 pp. ($6.95. How to make alterations on every part of a garment for adults and children; remaking garments; how to be your own furrier.)

Learning to Sew, Parts I and II. New Brunswick, New Jersey: Vocational-Technical Laboratory, n.d. n.p. ($2.00 each. Basic introduction to sewing. Contains assignments and vocational sections.)

Let Yourself Sew. New York, New York: Simplicity Pattern Company, 1972. 96 pp. ($ .75. Good pictures, easy to read and understand.)

McDermott, Irene E. and Norris, Jeanne L. *Opportunities in Clothing*. Peoria, Illinois: Chas. A. Bennett Co. Inc., 1972. 350 pp. ($7.84. SP $5.88. Good on careers, and industrial sewing. Includes clothing construction, fitting, and alteration.)

Man-Made Fibers Fact Book. Washington, D.C.: Man-Made Fibers Producers Association, Inc., 1969. 44 pp. (Free. Manufacture of man-made fibers. Names and addresses of producers of man-made fibers.)

Personal Development for Girls. Austin, Texas: The Instructional Materials Laboratory, 1966. 146 pp. ($3.00, answer book, $1.50. Being revised. Developing personal health, personal appearance, skills and behavior.)

Ready, Set, Sew. New York, New York: Butterick, Co., 1971. 320 pp. ($7.95. Book covers preparation for sewing, alterations, and actual sewing processes and techniques. A set of 225 slides, "See and Sew," for $180.00 is also available from Butterick. Covers every basic construction skill.)

References and Aids in the Teaching of Home Economics and Related Occupations. New Brunswick, New Jersey: Vocational-Technical Curriculum Laboratory, 1971. 47 pp. ($ .63.)

Ritcher, David J. *Occupational Essentials: Skills and Attitude for Employment*. 3rd ed. Rockford, Illinois: H.C. Johnson Press Inc., 1970. 200 pp. ($3.95. Instructor's guide, $7.50. Determining interests and talents, locating job openings, securing a job, succeeding on the job, the role of self-evaluation in advancement, and leaving a job.)

Schubert, Benevieve W. *A Sample Wage Earning Program for Dry Cleaning and Laundry Aids*. Milwaukee, Wisconsin: Milwaukee Vocational Technical and Adult Schools. 1966. 37 pp. ($1.00. Program planning and organization, implementing the program, post-program suggestions.)

Simplicity Sewing Book. New York, New York: Simplicity Pattern Company, 1972. 256 pp. ($1.00. Good illustrations, written simply, includes sewing for men.)

* Vanderhoff, Margil. *Clothes - Part of Your World*. Boston, Massachusetts: Ginn and Company, 1970. 275 pp. ($7.80, s.p. $5.85, teacher's manual s.p. $ .75. Grades 7-9. Basic information on textiles, clothing care, sewing, repair, vocations.)

* Vanderhoff, Margil; Franck, Lavina; and Cvampbell, Lucille. Textiles for Homes and People. Levington, Massachusetts: Ginn and Company, 1973. 516 pp. ($7.68, s.p. $5.76, teacher's guide, $1.44. Textiles, fabric, textile laws and standards, consumer needs and wants, tailoring, occupations in textiles.)

Vocational Instructional Materials for Students With Special Needs. Portland Oregon: Northwest Regional Educational Laboratory, 1972. 225 pp. (Free.)

The Vogue Sewing Book of Fitting Adjustments and Alterations. New York, New York: Butterick Fashion Marketing Co., 1972. 185 pp. ($8.95. Fitting patterns, making corrections, figure problems, combining patterns, fitting shells, and alterations.)

Wyllie, Ethel K. Today's Custom Tailoring. Peoria, Illinois: Chas. A. Bennett Co. Inc., 1971. 285 pp. ($8.32, s.p. $6.34. Grades 7-12. Fabric and pattern selection, equipment, pattern use, cutting and marking, basic terms and techniques, buttonholes and pockets, interfacing, collar, fitting, sleeves, hem, lining, finishing details and decorative touches, tailoring doubleknit and non-wool woven fabrics.)

FILMS

Care for the Clothes You Wear. Joliet, Illinois: International Fabricare Institute, n.d. (Color, sound, 13 1/2 min., free loan. Shows the ways the drycleaner serves the consumer.)

Fabric Care Magic. Joliet, Illinois: International Fabricare Institute, n.d. (Color, sound, 13 1/2 min., free loan. Shows how fabrics are cared for at the professional laundry.)

The Singer Generations. Elizabeth, New Jersey: Singer Industrial Products, 1970. (Color, sound, free loan. Comparison of production techniques and sewing machines from the 1940's to the 1970's.)

FILMSTRIPS

Figure Flattery Through Optical Illusion. Manhattan, Kansas: The McCall Pattern Co., n.d. (Color, silent, instruction commentary manual, $4.50. Using lines and color to improve appearance of figure.)

Knowing Your Industrial Sewing Machine. New York, New York: The Singer Company, n.d. (Color, silent, Cassettes in English, Spanish, and French, free loan. Explains in easy-to-understand terms and diagrams how an industrial sewing machine operates. Shows difference between professional, industrial machine and home sewing machine; function of a variety of lockstitch and chainstitch machines.)

Learning to Use a Sewing Machine. Chicago, Illinois: SVE, Society for Visual Education Inc., 1970. (Color, silent, 4 filmstrips, 2 records or cassettes, 4 teacher's guides, $34.50 with records, $38.50 with cassettes. Titles include Basic Parts and Their Functions, Learning to Guide Fabric, How to Thread, and How to Stitch. Emphasizes forming good sewing habits through easy-to-do exercises and simple demonstrations.)

McCall's Custom Method of Fitting. Manhattan, Kansas: The McCall Pattern Company, n.d. (Color, silent, 6 filmstrips, $4.50 each filmstrip. Titles include Figure Your Size, Figure Your Fit-Bodice, Figure Your Fit-Skirt, Figure Your Fit-Pants, Figure Your Fit-French Darts, and Figure Your Fit-Curved Seaming.)

McCall's Custom Method of Sewing. Manhattan, Kansas: The McCall Pattern Company, n.d. (Color, silent, 12 filmstrips, $4.50 each filmstrip. Titles include Begin With a Pattern, Start to Sew, Facing a Neckline, Applying a One-Piece Neck and Armhole Facing, Making a Peter Pan Collar, Making a Bound Buttonhole, Setting in a Sleeve, Applying a Waistband, Hemming a Skirt, Underlining and Lining a Dress, Handling Plaids and Stripes, and Making a Convertible Collar.)

What Makes It Sew? Elizabeth, New Jersey: Singer Industrial Products, n.d. (Color, cassettes in English, Spanish and French, free loan. Explains in easy-to-understand terms and diagrams how an industrial sewing machine operates.)

Why Won't It Sew? Elizabeth, New Jersey: Singer Industrial Products, n.d. (Color, cassette, free loan. Covers care of the industrial sewing machine and common problems affecting its operation and how to solve them.)

PAMPHLETS

Alterations and How to Make Them. Great Neck, New York: Kogos Publications/ Apparel Institute, 1967. 44 pp. ($5.00. Alterations on Men's Garments.)

Apparel Design and Production; A Suggested Program Guide. Washington, D.C.: U.S. Government Printing Office, 1973. 111 pp. ($1.40. The apparel design and production field, background instruction, basic skill development, and career advancement.)

Basic Stitch Types. Somerville, New Jersey: The Singer Company, 1953. 19 pp. (Free. Basic stitch types, basic seam types, machine fittings, machine attachments, lockstitch machines, types of take-up, needle-thread tension, stitch-forming action of lockstitch machines, common sewing troubles and their correction.)

Career Exploration in the Fashion Industry; A Suggested Program Guide. Washington, D.C.: U.S. Government Printing Office, 1973. 65 pp. (Free. Fashion merchandising, apparel design and production, textile design and production, and drycleaning and laundry.)

Clothing Repair. Washington, D.C.: U.S. Government Printing Office, 1965. 29 pp. ($ .25. Patches and patching, darns and darning, and mending. Home and Garden Bulletin #107.)

Drycleaning and Laundry; A Suggested Program Guide. Washington, D.C.: U.S. Government Printing Office, 1973. 68 pp. (Free. Spotting, drycleaning, finishing, laundering, and salesmanship.)

Everything About Sewing Special Fabrics. New York, New York: Butterick Fashion Marketing Company, 1972. 48 pp. ($1.50. Covers selecting fabric for patterns. Includes: velvet, laces, satin, sheers, crepe, taffeta, brocade, metalics, beaded fabrics, jerseys, super-stretchables, ribbed fabrics, and cashmere.)

Everything About Sewing Trims. New York, New York: Butterick Fashion Marketing Company, 1971. 48 pp. ($1.50. Covers braid, bands, fringe, tassels, pompons, lace, ruffles, feathers, fur, beads, sequins, applique, decorative stitchery, patchwork, quilting, smocking, shirring, and decorative closures.)

Glossary of Machine Sewing Terms. Somerville, New Jersey: The Singer Company, 1971. 25 pp. (Free.)

Opportunity and a Future in the Drycleaning Industry. Silver Spring, Maryland: National Institute of Drycleaning, 1967. 15 pp. (Free.)

Singer Operator Training Manual for the Needle Trades. Somerville, New Jersey: The Singer Company, 1956. 24 pp. (Free. Includes information on selection of learners, training, stitching exercises, incentive program, standard hour plan, piecework system, learner's expectancy curves, and trainee's progress chart.)

Singer Shop Clinic. Somerville, New Jersey: The Singer Company, 1970. 33 pp. (Free. Information on common sewing problems, maintenance hints, seams, stitches, fabrics, feeding systems, and needles.)

Textile Handbook. Washington, D.C.: American Home Economics Association, 1970. 128 pp. ($3.00. Covers fibers, yarns, fabric construction, finishes, dyes and dyeing, fabric design, care, textile labeling, textile standards, and textile legislation and trade rules and regulations.)

Welcome to Our Company. n.p.: Needle Trades Publishing Corporation, 1971. 13 pp. (Minimum order-10 sets @ $ .65 each, 11-25 sets @ $ .60 each. Order from Bobbin Publications, Inc. Includes exercises on using industrial sewing machines and stitch charts.)

RESOURCE KIT

Laundering. Cincinnati, Ohio: Proctor and Gamble Company, n.d. (Free. Teacher kit and student leaflets in lots of 25, 50, and 100. Includes sorting clothes, stain removal, pre-treating laundry, choosing laundry products, reading and following product label instructions.)

TRANSPARENCIES

Basic Figure Problems. Englewood Cliffs, New Jersey: Co-Ed/Forecast, n.d. (Transparencies $7.50, Masters $2.50. Information basic to custom clothing construction.)

Basic Pattern Adjustments. Manhattan, Kansas: McCall's Pattern Company, n.d. ($2.50. Seventeen different adjustments are shown.)

Beginning Construction. Manhattan, Kansas: McCall's Pattern Company, n.d. ($2.50. Shows basic techniques of cutting, marking, and the making of darts.)

Clothes Storage. Englewoo d Cliffs, New Jersey: Co-Ed/Forecast, n.d. (Transparencies $7.50, Masters $2.50. Basic information on storing clothes.)

Figure Your Type and Size. Manhattan, Kansas: McCall's Pattern Company, n.d. ($2.50. Measuring for pattern figure type and size and how to understand pattern ease.)

How to Read a Pattern. Englewood Cliffs, New Jersey: Co-Ed/Forecast, n.d. (Transparencies $7.50, Masters $2.50. Information basic to custom clothing construction.)

Line and Shape, Parts I and II. St. Paul, Minnesota: 3-M Company, n.d. (23 transparencies each. $35.00 each part. Part I-Horizontal and vertical lines in dress. Part II-Curved line, diagonal line and silhouettes.)

Sewing Series. Fort Atkins, Wisconsin: Nasco, n.d. (Prices vary. See catalog for titles available.)

Sturm, Mary Mark; Grieser, Edwin, and Roberts, Jane. Guide to Modern Clothing Transparencies. New York, New York: Webster/McGraw Hill, 1969. (Two sets. Line and Color in Clothes-$69.00, and Design in Clothes-$65.00. Teacher's guide.)

Using A Pattern. Manhattan, Kansas: McCall's Pattern Company, n.d. ($2.50. Shows information on pattern envelope, markings on pattern, and how to place on fabric.)

Weaves. St. Paul, Minnesota: 3-M Company, n.d. (23 transparencies, $35.00. Basic weaves and their variations as well as the steps in construction.)

Zipper Application. St. Paul, Minnesota: 3-M Company, n.d. (23 Transparencies. $35.00. Covers lapped, centered, and hand-picked applications.)

OTHER

Basic Dressmaking Series. n.p.: Eothen Films Limited, n.d. (Filmloops, color, silent, 3-5 min. each, $20.00 for 8mm, $22.00 for Super 8mm. Order from Encyclopedia Britanica Educational Corporation. Titles include: Pattern Measuring, Laying Out, and Cutting; Tailor-Tacking, Basting Darts and Seams, and Fitting; Sewing and Pressing; Inserting a Zipper; Making a Waistband I and II; Attaching a Waistband; Turning Up a Hem; Bound Buttonhole I and II; Machine-Made Buttonhole; Making a Collar I and II; Preparing Facing for a Collar; Attaching a Collar; Making a Sleeve; and Setting in a Blouse.)

Careers in Retailing and Marketing; Set I: The Department Store. New York, New York: Fairchild Visuals, 1971. (Color, silent, 25 slides, script. $80.00. Covers positions from stock clerk to store manager.)

Careers in Retailing and Marketing; Set IV: Careers in Fashion. New York, New York: Fairchild Visuals, 1973. (Color, silent, 30 slides, script. $80.00. Includes careers in textiles, manufacturing, sales, and fashion writing at all levels.)

Sewing Series. New York, New York: McGraw-Hill Films, n.d. (Filmloops, color, silent, $85.00 for 8 filmstrips, $8.50 individually. Basic tools and techniques presented for the begining students. Titles include: Tools for Sewing; Machine Stitching and Seams; Pattern Choice and Use; Selection and Treatment of Fabrics; Cutting and Construction; Placket Fasteners and Waistbands; Sleeves and Neckline Treatments; and Buttonhole Types.)

Sewing Technique Series. New York, New York: McGraw-Hill Films, n.d. (Filmloops, color, silent, four sets. Set I-$110.00. Set II-$145.00. Set III-$145.00. Set IV-$110.00. Individually-$20.00. Basic techniques of clothing construction, terminology of clothing construction, and proper handling of sewing machines and other equipment. Titles include: Set I-Tracing; Stay Stitching; Darts: Double Pointed Darts; Plain Seams; and Curved Eased Seams. Set II-Tailor's Tacks; Sheer Fabrics: Pining Darts; Sheer Fabrics: Stitching and Pressing Darts; Heavy Fabric: Marking and Pinning Darts; Plain Hem; Preparing a Curved Hem; Taped Hem; and Dressmaker's Hem. Set III-Seam Finishes: Stitching and Pinking; Seam Finishes: Turned and Stitched; Seam Finishes: Hard Overcasting; Seam Finishes: Machine Overcasting; Preparing a Facing; Applying a Facing; Preparing a One-Piece Facing; and Applying a One-Piece Facing. Set IV-Preparing a Zipper Placket; Centered Zipper; Lapped Zipper: Machine Application; Lapped Zipper: Hand Application; Hidden Zipper: Using Special Foot; and Hidden Zipper: Using Regular Zipper Foot.)

PAMPHLET SOURCES

American Technical Society, 848 East 58th Street, Chicago, Illinois 60637.

American Textile Manufacturing Institute, Inc., 1501 Johnson Bldg., Charlotte, North Carolina 28202.

American Thread Company, 260 West Broadway, New York, New York 10000.

Association-Sterling Films, Inc., Agents for Sears Consumer Information Services, 512 Burlington Avenue, La Grange, Illinois 60525

The Boye Needle Company, Educational Projects Division, 4343 North Ravenswood Avenue, Chicago, Illinois 60613.

Butterick Fashion Marketing Co., Book Publishing Division, P.O. Box 1914, Altoona, Pennsylvania 16603

Calgon Corporation, Home Service Department, Calgon Center, Pittsburgh, Pennsylvania 15230.

Department of the Interior, The Job Corps Center, Office of Manpower Training and Youth Activities, Room 2428, Main Interior Building, Washington, D.C. 20242.

The Education Bureau of, Coats and Clark's, Inc., 430 Park Avenue, New York, New York 10022.

Folliet Publishing Company, Customer Service Center, Box 5705, Chicago, Illinois 60680

Frank E. Richards Publishing Co., Inc., 324 First Street, Liverpool, New York 13088.

General Electric Company, Housewares Business Division, Department 9-F-72, 1285 Boston Avenue, Bridgeport, Connecticut 06602.

McCall's Pattern Co., Educational Department, P.O. Box 9119, Manhattan, Kansas 66502.

Mafex Associates, Inc., 111 Barron Avenue, Johnstown, Pennsylvania 15906.

Nasco Company, Fort Atkinson, Wisconsin 53538.

Nasco Company, P.O. Box 3837, Modesto, California 95352.

Proctor and Gamble Company, Free Teaching Aids, P.O. Box 14009, Cincinnati, Ohio 45214.

Simplicity Pattern Company, Simplicity Educational Division, 200 Madison Avenue, New York, New York 10016.

Singer Manufacturing Company, Industrial Products Division, 30 Rockefeller Plaza, New York, New York 10020.

Southwestern Bell Telephone Company, Film Library, 1709 South Lamar Street, Dallas, Texas 75215.

South Western Publishing Company, 5101 Madison Road, Cincinnati, Ohio 45227.

Stacy Fabrics Corporation, Educational Department, Division of U.S. Industries, Inc., 469 7th Avenue, New York, New York 10018.

Union Special Machine Company, 400 North Franklin, Chicago, Illinois 60610.

U.S. Department of Labor, Bureau of Labor Standards, Washington, D.C. 20212.

PUBLISHERS' LIST

American Home Economics Association
2010 Massachusetts Avenue N. W.
Washington, D.C. 20036

American Technical Society
348 East 58th Street
Chicago, Illinois 60637

American Textile Manufacturing
Institute, Inc.
1501 Johnson Building
Chorlotte, North Carolina 28202

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260 West Broadway
New York, New York 10000

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512 Burlington Avenue
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Main Interior Bldg.
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Curriculum Laboratory
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Rockward, Illinois 61110

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The University of Texas
Austin, Texas 78712

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Ames, Iowa 50010

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Philadelphia, Pennsylvania 19105

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710 South West Second Avenue
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Publications Division, Office of Information
U. S. Department of Agriculture
Washington, D.C. 20250

Simplicity Pattern Company
Simplicity Educational Division
200 Madison Avenue
New York, New York 10016

The Singer Company, Industrial
Products Division
500 Finderne Avenue
Somerville, New Jersey 08876

Singer Industrial Products
321 First Street
Elizabeth, New Jersey 07206

The Singer Company
Education Department
250 Fifth Avenue
New York, New York 10001

Southwestern Bell Telephone Company
Film Library
1709 South Lamar Street
Dallas, Texas 75215

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5101 Madison Road
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Stacy Fabrics Corporation
Educational Department
Division of U.S. Industries, Inc.
469 7th Avenue
New York, New York 10018

Steck-Vaughn Company
807 Brazos
Box 2028
Austin, Texas 78767

Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

SVE Society for Visual Education
Inc.
1345 Diversey Parkway
Chicago, Illinois 60614

Home Economics Instructional
Materials Center
P. O. Box 4067
Texas Tech University
Lubbock, Texas 79409

3M Company
Visual Products Division
Box 33344
St. Paul, Minnesota 55101

Union Special Machine Company
400 North Franklin
Chicago, Illinois 60610

United States Department of Labor
Bureau of Labor Standards
Washington, D.C. 20212

University of Kentucky
Instructional Materials Laboratory
Division of Vocational Education
Lexington, Kentucky 40506

Utah State Board for Vocational Education
1400 University Club Building
136 East South Temple
Salt Lake City, Utah 84111

Webster McGraw Hill
8301 Ambassador Row
Dallas, Texas 75247